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ABSTRACT

This publication provides examples of the types of services that may be provided to Minnesota gifted/talented students and the corresponding outcomes accomplished by students when such services are provided. The first chapter examines education system values, a philosophy of education, the mission of public education, and Minnesota State Board of Education Learner Goals. Chapter 2 contains recommended standards for service to gifted/talented students. Chapters 3 and 4 examine model learner outcomes, listing outcomes for curriculum-based services and for student-based services and offering guidelines for matching curriculum and services to outcomes. Chapter 5 discusses purposes of assessment and evaluation, describes tools and techniques, and provides examples of types of complex outcomes. Appendices contain: (1) a chart which describes the differences between gifted/talented students and their age peers in each domain of giftedness and their related educational needs; and (2) examples of differentiated plans, both curriculum-based and student-based. A list of nine suggested readings concludes the document. (JDD)

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Model Learner Outcomes for GIFTED AND TALENTED LEARNERS

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Model Learner Outcomes for Gifted and Talented Learners

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MINNESOTA

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Preface

"...exceptional levels of talent development require certain types of environmental support, special experiences, excellent teaching, and appropriate motivational encouragement at each stage of development."

Dr. Benjamin S. Bloom, *Developing Talent in Young People*

This publication is intended to spark discussion, promote evaluation of current efforts and encourage the development of new curricula and services for gifted and talented learners. *Model Learner Outcomes for Gifted and Talented Learners* is designed to provide educators with some examples regarding the types of services which may be provided to gifted and talented students and the corresponding outcomes which are accomplished by students when service is provided.

Programs for the gifted are really planned adaptations to the school program because it is judged inadequate to properly support the talent development of individuals with exceptional potential or achievement. The State Board of Education's definition of giftedness includes several broad areas: general intellectual ability, specific academic aptitude, creative or productive thinking, leadership ability, visual and performing arts. The outcomes and services described in this document may be thought of as a beginning list.

As we come to know more about how giftedness is expressed and supported in our culture, it is expected that the identification, services, and outcomes for gifted students will grow. For example, the vocationally gifted student shows his or her talent through the use of creativity in methods or approaches, motivation, and exceptional competence in a defined area. As each content area addresses the needs of gifted persons in a field, the need for this type of document will no longer exist. Early recognition, continued support and appreciation for talent and ability are essential ingredients for the full development of gifted and talented learners.

Finally, I would like to acknowledge the efforts of Diane Heacox, Teacher on Special Assignment to the Minnesota Department of Education, for her contributions to this "final" publication. Her innovative ideas, insistence on clear language, and persistence in the completion of this publication were appreciated.

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The idea and the format for a differentiated planning guide using the recommended state criteria was developed by Elaine Chirhart, Becker Public Schools and Debra Lechner, Sartell-St. Stephens Public Schools.

State Board of Education 1

Values, Philosophy, Mission and Goals

Education System Values

Philosophy of Education

Mission for Public Education

Mission of the Minnesota Department of Education

Minnesota State Board of Education Learner Goals

VALUES, PHILOSOPHY, MISSION AND GOALS

School districts nationwide, and certainly in Minnesota, are constantly striving to improve the learning experiences they provide students. The last two or three decades have seen heightened interest in improving all parts of the education process, including appropriate involvement of students, parents and the community at large.

The publications that constitute the Minnesota Department of Education's Coordinated Model for Educational Improvement incorporate many of the concerns expressed and issues addressed by the public, Legislature, and in reports on the state of public education. One of these publications, titled Goal and Outcome Specification Process, suggests a set of procedures for appropriate involvement of the public. These procedures include public participation on the development of statements of values, philosophy, mission, and learner goals. These sets of statements are a hierarchy of increasingly specific concepts ranging from values, the most general, to learner goals, the most specific, that give form and direction to public education. Given this hierarchy, staff skilled in subject matter and the profession of teaching can develop very specific learner outcomes for each subject area.

The following sets of statements were adopted by either the Minnesota State Board of Education or the Minnesota State Legislature for two purposes. First, they provide a model for use by communities and school staff as they strive to improve the learning experiences they provide for residents. Second, they are the hierarchy used by Department staff and teams of educators as they develop model learner outcomes for each subject area. Only the Mission Statement for Public Education adopted by the Legislature gives explicit direction to public schools. All other parts of thispublication are models, suggestions for the consideration of residents and professionals in each district.

EDUCATION SYSTEM VALUES

We believe the following values are preeminent for the education system. These attributes are to be reflected in all educational programs and operations.

ACCOUNTABILITY - A condition in every school whereby each is able to justify its use of public resources by effectively fulfilling its mission of learning.

EFFECTIVENESS - A condition in every school whereby each accomplishes its mission at a performance level defined by learners, parents, citizens of the community and state, and their representatives.

EFFICIENCY - A condition in every school whereby each accomplishes the highest possible level of excellence with available resources.

EXCELLENCE - A condition in every school whereby the highest possible standards for performance are expected of all students and staff.

FLEXIBILITY - A condition in every school which results in meeting the needs of learners through sensitive and creative responses to changing circumstances.

HUMAN EQUITY - A condition in every school which offers equal opportunity and appropriate individualized support to each staff member in employment and professional growth and to each learner in the educational process. Also, a condition which, fully, fairly, and accurately portrays various cultures, races, and genders in the instructional program.

RESPONSIBILITY - A condition in which the school recognizes that the parent has primary responsibility to assure the child is educated, and in which a partnership exists between the school, community, parent, and the learner to identify the learning goals and needs of the child or adult learner and provide appropriate learning opportunities through which those goals can be met.

RESPONSIVENESS - A condition in every school whereby diversity of personal and group needs and aspirations are expected, accepted, encouraged, and routinely addressed.

SYSTEM EQUITY - A condition in the education system whereby each school is provided with the resources necessary to assist all learners in achieving excellence.

WHOLENESS - A condition in every school whereby each gives necessary and appropriate consideration to the potential career needs, spiritual, social, emotional, and physical growth of each learner and staff member as it designs and implements educational programs.

VISIONARY - A condition in the education system whereby emerging trends which will affect the knowledge and skills required to be a successful adult are examined and the knowledge gained is used to produce appropriate changes in the system's course content, procedures, and goals for learners.

LEARNER VALUES

We believe helping students develop the following values is a primary purpose of education.

ACCOUNTABILITY - A quality in individuals whereby each knows, understands and accepts the impact and consequences of personal actions and decisions.

CITIZENSHIP - A quality in individuals whereby each has an understanding, appreciation, and support of the institutions of American government and society and a willingness and ability to participate in the democratic process and in socially beneficial service activities.

COMPASSION - A quality in individuals whereby each is sensitive to the conditions affecting the lives of others and each has the commitment to assist others when appropriate and possible.

COMPETENCE - A quality in individuals whereby each attains maximum levels of knowledge, skill and affect commensurate with his or her potential.

COOPERATIVENESS - A quality in individuals whereby each interacts with others in a manner that mutually benefits all participants in the interaction.

CREATIVITY/FLEXIBILITY - A quality in individuals whereby each acts or expresses self in new, improved, or unique ways.

ETHICS - A quality in individuals whereby each displays consistent personal and professional integrity and an acceptance of the responsibility to act for the benefit of all learners.

HONESTY - A quality in individuals whereby each is fair and straightforward in the conduct of human interaction.

LEARNING - A condition in individuals whereby each continually strives throughout life to learn more and to increase personal levels of fulfillment and competence in human endeavors.

PROBLEM SOLVING - A condition in individuals whereby each has the ability to identify, frame, and propose new, improved, or unique solutions to existing and emerging problems.

RESPONSIBILITY - A quality in individuals whereby each strives to fulfill the obligations of economic self-sufficiency and active commitment to the common good of society.

SELF-ACCEPTANCE - A quality in individuals whereby each has a positive self-image, through assertion of rights, holding personal, physical and emotional well-being as an ideal, accepting personal talents with humility, and personal limitations with the resolve to improve where possible and accept where necessary.

SPIRITUALITY - A quality in individuals whereby each recognizes and accepts the importance of nurturing one's inner spirit, that creative force that transcends the human and the material.

THINKING - A condition in individuals whereby each continually strives to improve personal skills for mental manipulation of sensory perceptions to form knowledge, thoughts, reason, and judgements.

THE MINNESOTA STATE BOARD OF EDUCATION PHILOSOPHY OF EDUCATION

WE BELIEVE . . .

. . . Every person can learn.

. . . Learning is a lifelong process.

. . . Every person must understand and accept self before he or she can become a contributing member of society.

. . . Each person has gifts which the education program must seek, identify, and help to maximize.

. . . Advancement of the human race requires individuals who are honest, respon sible, compassionate, cooperative, creative, and competent.

. . . The state and local communities have a shared responsibility to assist each person in learning.

. . . Each community has a shared responsibility with parents for meeting the needs of each child.

. . . The community and its school system must continually look to and strive to meet the future education needs of society.

. . . The education system must assist each person to become functional in an in creasingly global and interdependent world.

. . . The education system must lead people to value and accept a wide diversity in human behaviors, sophistication, and values.

. . . The education system must maintain high standards for responsiveness, human equity, and system equity in the provision of educational opportunities.

. . . Decisions regarding planning, implementing, and maintaining learning opportu nities must be vested as close to the individual learner as efficient use of public resources allow.

. . . School systems must implement programs that stress the intellectual develop ment of each learner in concert with the spiritual, social, emotional, and physical development of the learner.

. . . School systems must model and nurture creativity in learners.

. . . School systems must maintain opportunities for all learners to develop compe tence in personally selected areas of human development.

. . . Professional educators have a responsibility to remain current with evolving knowledge about human growth and development, learning theory, and knowl edge of subject matter.

. . . Professional educators and elected or appointed education policymakers have a responsibility to account to the public for the excellence of their efforts.

. . . Professional educators and elected or appointed education policymakers have a responsibility to use public resources prudently and efficiently.

. . . Staff employed in schools must model the behaviors they are assisting learners to develop.

MISSION FOR PUBLIC EDUCATION

As adopted by the Minnesota Legislative Commission on Public Education
and enacted into law, Chapter 240, Laws of 1985

The purpose of public education is to help individuals acquire knowledge, skills, and positive attitudes toward self and others that will enable them to solve problems, think creatively, continue learning, and develop maximum potential for leading productive, fulfilling lives in a complex and changing society.

MISSION OF THE MINNESOTA STATE BOARD OF EDUCATION

The Minnesota State Board of Education will provide the vision, advocacy and leadership to improve significantly the quality of education throughout the state.

MISSION OFTHE MINNESOTA DEPARTMENT OF EDUCATION

The Minnesota Department of Education provides leadership, service, and regulation to maintain and improve an equitable, uniform, and quality system of public education for all learners.

The Department provides leadership as an advocate for education by defining quality education and by seeking the resources necessary to meet the needs of all learners.

The Department provides service through informational and technical assistance that will improve the productivity and performance of students and staff, and provide opportunities for the development of the potential of all learners.

The Department regulates education by maintaining, interpreting, and enforcing Minnesota State Board of Education rules, and state and federal laws.

MINNESOTA STATE BOARD OF EDUCATION

LEARNER GOALS

The following learner goals are a general statement of the purpose for education, they describe the type of person who would graduate from a Minnesota school and are a model for local goal adoption.

A. To effectively participate in learning activities, each learner will master:

1. Reading literacy to gather information and data, gain perspective and understanding, and as a leisure activity
2. Writing to explain, describe, and express a point of view and feelings
3. Listening to gather information and data and gain perspective and understanding
4. Speaking to explain, describe, express a point of view and feelings, and to discuss an issue
5. Numerical literacy to apply arithmetic functions to life situations
6. The use of a variety of tools, including electronic technology, to enhance learning
7. Viewing and observing to gather information and data, gain perspective and understanding
8. Self-expression through visual and performing arts.

B. To provide a foundation for meaning in life, each learner will accumulate and apply knowledge and develop the understanding:

1. To participate in lifelong learning
2. To live successfully within local, state, national, and world political and social structures

3. To examine personal beliefs and values and their relationship to behavior

4. To make ethical and moral decisions

5. To be a responsible citizen of the community, nation, and the world

6. To practice stewardship of the land, natural resources, and environment

7. To know the impact of human life on nature and the impact of natural phenomena on human life

8. To express self through artistic creation

9. To know career options and the general education requirements for each

10. To know world and national economic conditions to make informed decisions on consumer products, occupations, career needs and use of resources

11. To select or prepare for a series of occupations which will personally satisfy and suit one's skills and interests

12. To manage personal affairs

13. To communicate and relate effectively in a language and about a culture other than one's own;

14. To know the importance of geographic location in the functioning of contemporary society.

C. To think, decide, resolve issues, and meet needs creatively, each learner will be able to:

1. Compare, differentiate, and relate information and facts, and apply knowledge

2. Combine various facts, situations, and theories to formulate hypotheses or develop solutions

3. Critique and make judgments about materials, conditions, theories and solutions

4. Generate and value creative alternatives

5. Create musical, visual, and verbal images, and movement as a means of self-expression.

D. To value, understand, and accept human interdependence, each learner will be able to:

1. Seek interactions and feel comfortable with persons who are different in race, religion, social level, or personal attributes

2. Understand the interrelationships among complex organizations and agencies in modern society

3. Understand society's responsibility for dependent persons of all ages in a manner consistent with the growth and development needs of those persons

4. Understand how the citizens of the United States are geographically and socially connected to people and places in other parts of the world.

E. To value, understand, and accept the diversity of humankind, each learner will be able to:

1. Base actions and decisions on the knowledge that individuals differ in many ways

2. Base actions and decisions on the knowledge that values and behaviors differ from one social group to another

3. Base actions and decisions on the understanding that lifestyles and behaviors reflect the value system of the society in which they were learned

4. Judge other's actions with an understanding of the personal and social context of that action

5. Understand people of other cultures through their visual and verbal arts, music, and creative movement

6. Accept that there is more than one way of being human

7. Base actions and decisions on the understanding that as individuals move from one society to another, they can learn lifestyles and can learn to behave appropriately in different societal contexts

8. Act on the belief that human behavior is influenced by many factors and is best understood in terms of the context in which it occurred.

F. To address human problems through group effort, each learner will develop the knowledge, skills, and affect essential to:

1. Act in accordance with a basic ethical framework incorporating the values which contribute to successful community life such as honesty, fairness, compassion, and integrity

2. Understand the importance of working in groups to achieve mutual goals

3. Be able and willing to provide leadership in resolving personal and societal issues.

G. Each learner will be able to effectively resolve conflicts with and among others by:

1. Assuming responsibility to form productive and satisfying relationships with others based on respect, trust, cooperation, consideration and caring for other persons

2. Acting on the belief that each individual has value as a human being and should be respected as a worthwhile person

3. Resolving conflict in the manner most beneficial to society.

H. Each learner will be able to act on contemporary events and issues with a perspective of their historical origin by:

1. Understanding the origin, interrelationship, and effect of beliefs, values, and behavior patterns on world cultures

2. Understanding one's own culture and historical heritage through the political, literary, aesthetic, and scientific traditions of the past

3. Being familiar with the ideas that have inspired and influenced humankind

4. Understanding the manner in which heritages and traditions of the past influence the direction and values of society.

I. Each learner will develop a positive attitude toward self demonstrated through:

1. A feeling of positive self-worth, security, and self-assurance

2. A willingness to live with one's strengths and weaknesses

3. A knowledge of one's own body and a positive attitude toward one's own physical appearance

4. Understanding that efforts to develop a better self contribute to the development of a better society

5. Understanding that self-concept is acquired by interaction with other people

6. Appropriate control or release of emotions.

J. To set and achieve personal goals, each learner will develop the ability to:

1. Select appropriate personal learning goals

2. Make decisions about one's life

3. Plan, organize, and act to realize one's goals

4. Accept responsibility for personal decisions and actions

5. Work now for goals to be realized in the future

6. Select viable alternatives for action in changing circumstances.

K. To cope with change, the learner will have the ability to:

1. Initiate appropriate change while respecting existing structures and concepts

2. Tolerate ambiguity

3. Understand that coping with change is a lifelong process

4. Understand and accept the changing nature of work and the potential need to change careers several times

5. Use career information and counseling services to make informed and satisfying vocational choices.

L. To lead a healthy, fulfilling life, each learner will:

1. Assume responsibility for one's own physical and mental health and safety by establishing a daily regime of positive behaviors which will maintain mental and physical health, and motor fitness

2. Make informed decisions about health products and services

3. Make a lifestyle which promotes healthful family living

4. Understand public health measures and their effect on the individual, family, community, and the environment

5. Be able to enjoy play-skill activities which include understanding, coop eration, accepting rules, controlling emotions, following group process, and acquiring self-satisfaction.

M. To lead a productive life and actively contribute to the economic well being of our society, each learner will develop the work readiness skills of:

1. Applying the basic skills of communications, computation, and scientific principles to real-life situations in a technological society

2. Defining and interpreting the nature of the work force in terms of one's own challenges and opportunitie;

3. Leadership and citizenship skills necessary to succeed as an active agent in a changing work force

4. Understanding employment opportunities, job seeking and keeping skills, and specific work skills as they relate to transition from school to eco nomic productivity

5. Developing pride in good work and expecting quality in products and services

6. Adopting a positive attitude toward work, including an acceptance of the necessity of making a living and an appreciation of the social value and dignity of work.

Recommended Standards for Service to Gifted and Talented Students 2

State Board Rule

Definition of Gifted and Talented Students

Need for Service

Definition of Services

Identification and Equity Policy

Evaluation Criteria

References

State Board Rule

The State Board of Education adopted a rule which provides for the education of the gifted and talented students. It states:

> 3500.0500 **GENERAL EDUCATION PROGRAM REQUIREMENTS**
> Subpart 1. **Program for all pupils**. The educational program shall provide a general education for all pupils and suitable special education for exceptional children -- handicapped, gifted and talented.

On April 10, 1990, the State Board established a policy which requires that all learner outcome documents which are presented to the Board for review must contain an assessment of the impact of the content area on the gifted learner. Outcome documents should contain information on identification methods, services and outcomes which are appropriately advanced for gifted learners.

Definition of Gifted and Talented Students

This chapter outlines and defines educational services to gifted and talented students in Minnesota schools as adopted by the Minnesota State Advisory Council for the Gifted and Talented (April 22, 1988).

Who are gifted and talented students?

The definition adopted by the Minnesota State Board of Education in 1976 states:

Gifted and talented children are those who by virtue of outstanding abilities are capable of high performance. These are children whose potentialities can be realized through differentiated educational programs and/or services beyond those normally provided by the regular school program. Children capable of high performance include those with demonstrated achievement or potential ability in any of the following areas, singly or in combination: general intellectual ability, specific academic aptitude, creative or productive thinking, leadership ability, visual and performing arts.

Among these gifted and talented students described above are a smaller number of children deemed to have exceptional potential and/or achievement. These capabilities are evidenced in individuals of all races, creeds, national origins, genders, physical handicaps, or economic status.

How do the cognitive and affective needs differ between gifted and talented students and age peers?

There are differences between gifted learners and their age peers. According to the adopted definition, there is no single profile of gifted and talented students. The definition of giftedness implies that many cognitive and affective differences are present in gifted and talented students. A chart which describes these differences and the related educational needs for each domain of giftedness is provided in the Appendix. The differences between gifted and talented students and their age peers are ones of degree. Such differences require differentiation of the educational program to challenge and develop students' potential.

How do the cognitive and affective needs differ among gifted and talented students?

The gifted and talented population includes those who are capable of high performance and those with demonstrated achievement or potential ability in any of the following areas, singly or in combination: general intellectual ability, specific academic aptitude, creative or productive thinking, leadership ability, visual and performing arts. These abilities differ in degree among gifted individuals and are more pronounced in certain individuals. Such intense differences indicate that these learners require an individualized plan of service.

To clarify this difference, the term exceptional potential or achievement is used to describe those students who demonstrate extraordinary potential or performance in a domain.

Need for Service

Why are appropriate services for gifted and talented students necessary?

The differences between gifted and talented students and age-peers in psychological and academic areas have been well documented (Leukhardt 1981; Colangelo and Kelly, 1983; Van Tassel-Baska 1983; Trollinger 1983; Welsh 1978). When individual differences are not addressed in the educational setting, problems can result. Studies of children with exceptional abilities have shown that these persons typically performed far below their capacity, that they found their educational experiences frustrating, that developmental disharmonies between high intelligence and adequate physical ability caused problems, and that they often felt inferior, inadequate, and insecure with their peer group (Witty 1962; Haier and Denham 1976; Ross and Parker 1980; Klein and Cantor 1976; Stopper 1979; Albert 1980; Michael 1977).

The highly gifted receive little understanding and emotional support from school and community. The higher the ability, the greater the conflict and inconsistencies between culture and the individual in values, standards, concepts of behavior, and ways of life (Albert 1980; Austin and Draper 1981; Hollingworth 1976).

Studies document that there is a continuous and on-going need for the stimulation of a child's gift if the gift is going to be fully developed. It is believed that insufficient stimulation may result in permanent inability to fully develop the potential (Bennett, Rosenzweig and Diamond 1969; Feldman 1979; Gardner 1983).

In other words, unusual early accomplishment requires something more positive than merely "not interfering" with the development of the gifted child. Feldman (1979), has concluded that positive encouragement and training in the demonstrated potential area of giftedness is an absolute necessity.

Definition of Services

What services should schools provide for gifted and talented students?

Services to gifted and talented students are described as curriculum-based and student-based services. Schools must provide both types of service to achieve standards of minimum service for meeting the needs of gifted and talented students. Standards for minimum service and standards for excellence differ in the number of students served and the nature of the services, as shown on the next page.

Service Definitions

Curriculum-based services are curricular modifications which are made in the course content, the instructional strategies employed by the teacher and in the products required of the students. These services occur through a curriculum which has been modified to meet the needs of gifted and talented students during the course of instruction.

Student-based services are modifications to the student's program of learning which capitalize on the student's ability. It offers an individualized plan designed to promote the development of the student's full potential. These services occur after an examination of the student's abilities and interests and are designed to complement and extend the student's educational experiences.

Standards for Minimum Service

- Upper 5 percent of Student Population Curriculum-based Service
- Upper 1 percent of Student Population Student-based Service: Personalized Learning Plan

Standards for Excellence

- Upper 20 percent of Student Population Curriculum-based Service
- Upper 5 percent of Student Population Student-based Service: Personalized Learning Plan

Standards for Minimum Service

Gifted and talented students in every district should be guaranteed the following services:

1. The delivery of curriculum-based service to the majority of gifted and talented students (minimum of 5 percent of the total K-12 student population) is accomplished through the design and implementation of modified curriculum, instructional activities, and learning environment. Curriculum-based services may be provided through challenging instructional activities and experiences, courses, or ongoing group educational sessions. These services should be differentiated to meet the cognitive and affective needs of students during the regular school day.

2. The delivery of student-based services to students with exceptional potential and/or achievement in any domain (minimum of 1 percent of the total K-12 student population) is accomplished through personalized learning plans. Student-based services respond more directly to the unique needs of the learner which have little chance of being met by curriculum-based services alone.

A personalized learning plan may be developed to provide the student with one or more of the following enriched and/or accelerated opportunities: the replacement of the standard curriculum with advanced content and processes; the matching of a student with mentors in a chosen field; the participation of the student in an investigative project; or an individual or group counseling program.

Personalized learning plans involve the assessment of individual strengths and interests and the development and implementation of an educational program to meet the cognitive and affective needs of the gifted and talented student within (but not limited to), the regular school day. A statement of the goals and outcomes for the learner and an evaluation of student work is included in this plan. A cycle of periodic review of the personalized learning plan is also provided. This service is in addition to the curriculum-based options which are also provided .

Standards for Excellence

1. Curriculum-based service is expanded to provide for a greater number of students (upper 20 percent of the total K-12 student population). This percentage of students served is recommended to ensure service for students who may not be identified through the use of standard measures and/or those who require periodic challenging educational opportunities (Richert 1982).

2. Student-based service is expanded (upper 5 percent of the total K-12 student population and includes students with exceptional potential or achievement), to provide opportunities for collaborative work and for the interaction of ability peers.

Identification and Equity Policy

What is the process of identification?

The process of identification is two-fold: The first step is to locate gifted and talented students (Minnesota State Board of Education definition 1976) whose abilities are markedly different and who require a differentiated and challenging educational experience.

The second step is to place these students in a challenging program designed to meet the affective and cognitive needs of the student. Qualified personnel assess and evaluate students. The identification process must be responsive to the program services a district plans to implement.

Equity

The identification process must be comprehensive, multidimensional, and include the collection of both objective and subjective data. The identification instruments and procedures used to locate and place students must be carefully selected so that a broad spectrum of giftedness will be recognized. All instruments and procedures must be examined for cultural bias.

Additional efforts must be employed to ensure representation and participation of all student populations in gifted and talented educational programs. Individuals of all races, creeds, national origins, genders, physical handicaps, or economic status should be served in similar percentage as compared to the general population.

Who should be involved in providing services to gifted and talented students?

Curriculum-based Services

All educational personnel (including classroom teachers, guidance personnel, media specialists, principals, curriculum specialists) are involved as primary service deliverers in the identification, development, and delivery of curriculum-based services for gifted and talented students. All educational personnel must be knowledgeable of the cognitive and affective needs of gifted and talented students.

Student-Based Services

Specially trained educational personnel, knowledgeable and skilled in working with gifted and talented students will identify, develop, instruct, and/or facilitate the implementation of student-based services.

Evaluation Criteria

How should program services for gifted and talented students be evaluated?

The following criteria may be used to evaluate curriculum-based services for gifted and talented students:

1. The students' regular curriculum tasks are reduced and replaced with more challenging study when accelerated study is indicated.

2. Students are encouraged to pursue their personal interests and are stimulated to develop new interests or fields of study.

3. Students are engaged in learning strategies which emphasize advanced thinking.

4. Students receive an appropriate curriculum which is balanced between basic skills and experiences which develop scientific and creative, self-expressive behavior.

5. Students have opportunities for social and intellectual interaction among gifted peers with similar interests and abilities.

6. Students are encouraged to develop independent behavior, through shared responsibility for planning, evaluating, and decision making.

The following criteria may be used to evaluate student-based services for gifted and talented students:

1. The students' regular curriculum tasks are reduced and replaced with more challenging study when accelerated study is indicated.

2. The student and parents participate in the determination of educational objectives, the planning of appropriate learning activities, and the development of a personalized learning plan.

3. The student learns to understand and use the thought systems and methods of professionals in a chosen field or demonstrated area of talent.

4. The student's strengths are emphasized in learning activities.

5. The student is valued in a school climate where there is respect for all learning and the development of individual potential.

6. The student has opportunities for social and intellectual interaction among gifted peers with similar interests and abilities.

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Model Outcomes for Gifted and Talented Learners 3

Communications/Language Arts

Mathematics

Science

Social Studies

Visual/Performing Arts

Introduction

The broad definition of gifted and talented learners adopted by the Minnesota State Board of Education means that many content and talent areas are considered in the development and adoption of outcomes for gifted and talented learners. The learner outcomes which are described in this chapter are based on the following premises:

1. The focus of this document is the outcome identification, selection, and assessment process. This process is only one segment of the larger set of understandings needed to plan appropriate educational experiences for gifted and talented learners. The outcome document describes anticipated outcomes, it does not describe in detail program development, identification procedures, or other aspects of providing service to gifted and talented students which are important understandings in the delivery of service.

2. The outcomes described are intended to be tied to the learning experiences planned for the students and matched to the method of delivery of these services to gifted and talented learners. For example, curriculum-based outcomes are specific to one or more content areas. Student-based outcomes are "generic" in nature and apply across all fields or talent domains.

3. The outcomes are useful in that they provide insight regarding the outcomes one might expect during a student investigation or the development of advanced competencies of the student in a content or talent area. Thus, these outcomes are representative of possible outcomes, but not wholly inclusive of the field. In addition, the content areas which are provided, represent only a beginning list of possible outcomes. The aras of vocation-technical education, humanities, and health are examples of additional areas which will be added in the future.

4. Some of the outcomes identified are common for all students in a content or talent area, but were selected because these outcomes should be emphasized for gifted and talented learners. These outcomes are emphasized because they match the characteristics and related educational needs of these learners.

5. Curriculum-based outcomes were selected from the outcome publications in each of the content or talent areas which were examined. Additional outcomes for gifted and talented learners were also written as natural extensions in a content or talent area.

6. Student-based outcomes are reflective of the types of services provided and are designed to focus on the needs of the individual student. These outcomes evolve as new practices in the field are developed.

STATE BOARD LEARNER GOALS	GIFTED AND TALENTED LEARNER OUTCOMES Outcomes for Curriculum-Based Services	DEVELOPMENT AND CONCEPT EMPHASIS	TEST ITEM BANK
	Communications/Language Arts The student who exhibits or is capable of exhibiting outstanding performance in the communications/ language arts domain will:		
A,1-4	1. exhibit mastery of and achieve increased proficiency in the basic skills of communication as defined by *Model Learner Outcomes for Language Arts* and *World Languages*	Knowing, Applying, Integrating	
C,1-5	2. exhibit the ability to analyze a given issue, develop a constructive plan of action, and clearly communicate this plan to the appropriate audience, e.g., Parnes/Osborne Creative Problem Solving Model	Knowing, Applying, Integrating, Affective, Multicultural, Gender Fair, International	
A, 8	3. assume the role of a creative producer in the language arts field through such aesthetic endeavors as writing, speaking, literary analysis, and drama	Integrating, Affective, Psychomotor, Multicultural, Gender Fair	
A, 3	4. demonstrate the ability to listen attentively and critically respond, internally and/or externally, with an appropriate level of sophistication	Applying, Integrating, Affective, Multicultural, Gender Fair	
D, 4 H, 1	5. through the study of languages and cultures, demonstrate an understanding of the interdependence of people and environments	Knowing, Applying, Integrating, Affective, Multicultural, Gender Fair, International	
F,2	6. demonstrate knowledge of effective communication strategies in both homogeneous and heterogeneous group settings	Applying, Integrating, Affective, Gender Fair, Multicultural,	
H, 2-4	7. recognize that past forms of communication have reflected and influenced contemporary societies and that these developing forms may impact on future societies	Knowing, Applying, Integrating, Affective, Multicultural, Gender Fair, International	
I,4	8. demonstrate an understanding of the contributions that outstanding people have made to society through the application of their communication skills, e.g., an author, an artist, and/or musician	Knowing, Applying, Integrating, Affective, Multicultural, Gender Fair, International	
A, 3, 6-7	9. expand information gathering skills to assume the role of a life-long learner, e.g., independent research and self-directed study	Knowing, Applying, Integrating, Affective	

STATE BOARD LEARNER GOALS	GIFTED AND TALENTED LEARNER OUTCOMES	DEVELOPMENT AND CONCEPT EMPHASIS	TEST ITEM BANK
B, 13	10. pursue advanced learning in areas of special interest and talent in a communications field	Knowing, Applying, Integrating, Affective	
H,2	11. exhibit a refined ability to analyze the structure of language(s) as a means to communicating more effectively with others	Knowing, Applying, Integrating	
B,2	12. develop advanced communication skills in one or more world languages	Knowing, Applying, Integrating, Multicultural, International	
C,5	13. become creatively productive in the use of media technology (e.g., computer, photography, radio, tv) as communication tools	Applying, Integrating, Affective, Psychomotor	
M,4	14. evaluate the role of communications both as a career tool and as a career option.	Integrating	
	Mathematics		
	The student who exhibits or is capable of exhibiting outstanding performance in mathematics will:		
A,5	1. exhibit mastery and achieve a greater proficiency in mathematics as defined by *Model Learner Outcomes for Mathematics Education*, Minnesota Department of Education	Knowing, Applying, Integrating	
C,2	2. use problem-solving as a major focus of learning; such as selecting and using problem-solving strategies in a variety of settings	Applying, Integrating, Affective	
A,5	3. develop competencies in standard mathematical topics in greater depth (e.g. error analysis when studying decimals)	Knowing, Applying, Integrating	
A,5	4. develop knowledge of non-standard mathematical content (e.g., non-Euclidian geometry, discrete mathematic, historical topics and persons, numeration systems)	Knowing, Applying, Integrating, Multicultural, Gender Fair, International	
A, 5	5. have available early study of advanced mathematical content (e.g., indirect proof in middle school)	Knowing, Applying, Integrating	

STATE BOARD LEARNER GOALS	GIFTED AND TALENTED LEARNER OUTCOMES	DEVELOPMENT AND CONCEPT EMPHASIS	TEST ITEM BANK
A, 7 C, 1-4	6. work on open-ended investigations that stress higher-order thinking skills in mathematics	Knowing, Applying, Integrating	
A, 5	7. explore and solve significant real-world problems in mathematics	Applying, Integrating, Affective, International	
A, 4	8. communicate mathematical thought processes verbally and in writing by explaining and defending ideas	Knowing, Applying	
C, 2	9. generalize mathematical solutions and extend them to other concepts or topics	Applying, Integrating	
C, 1, 5	10. develop skills of visualization and spatial perception	Knowing, Applying, Integrating, Psychomotor	
B, 8	11. identify a math concept and creatively apply it to another subject area	Applying, Integrating, Affective	
A, 6	12. use materials, technology, and media to accomplish advanced or independent work.	Applying, Integrating, Affective	
	Science		
	The student who exhibits or is capable of exhibiting outstanding performance in science will:		
C, 1-4	1. exhibit mastery and achieve a greater proficiency in science as defined by *Model Learner Outcomes for Science Education,* Minnesota Department of Education	Knowing, Applying, Integrating	
B, 7 C, 1	2. understand science concepts and processes at an earlier age than the regular curriculum sequence suggests	Knowing, Applying, Integrating	
H, 2	3. understand how models are used in a variety of disciplines to represent certain concepts and ideas in that discipline	Knowing, Applying, Integrating	
H, 3	4. compare and contrast the components of an ecosystem with a micro or macroeconomic system	Applying, Integrating	
B, 6-7	5. explain how the concept of matter/energy relationship has changed in the past fifty years	Knowing, Applying, International	

STATE BOARD LEARNER GOALS	GIFTED AND TALENTED LEARNER OUTCOMES	DEVELOPMENT AND CONCEPT EMPHASIS	TEST ITEM BANK
B, 6	6. describe how the concept of the cell has evolved in conjunction with technological changes during the past hundred years	Knowing, Applying, Integrating	
B, 6-7 C 1	7. understand and give examples of structure/function relationships in the physical, biological and earth science areas	Knowing, Applying, International	
B, 7 C, 1-3	8. cite and explain examples drawn from various disciplines which show patterns where certain events or conditions seem to repeat themselves at regular intervals or periods	Knowing, Applying, Integrating	
C,1-3	9. examine a set of objects or variables, determine their relationships and how they interact to form a whole	Applying, Integrating	
A, 7 B, 7	10. understand science as one way of knowing and that science is tentative, replicable, probabalistic, historic, public and the result of human endeavor and culture	Knowing, Applying, Integrating, Affective, Multicultural, Gender Fair, International	
C, 1 H, 3	11. understand the conceptual schemes of the science disciplines and how they are interrelated	Knowing, Applying, Integrating	
A, 7, 3	12. understand that conceptual schemes are organizers for specific science disciplines and that these conceptual schemes are derived from specific observable phenomena	Knowing, Applying	
A, 2-4, 7	13. model natural concepts in a variety of modes and media	Knowing, Applying, Integrating	
A, 2 C, 1, 4	14. symbolize units and concepts in unique ways	Knowing, Applying, Integrating	
A, 7 C, 1, 3-4	15. create new ways of classifying and measuring objects and events	Applying, Integrating	
C, 4	16. invent novel ways to obtain information/knowledge about the universe	Applying, Integrating	
A, 7 K, 2	17. know that a scientific theory, like the products of other creative endeavors, is subject to extensive study by other members of the profession who will critique and sometimes change the creation	Knowing, Applying, Integrating	
A, 7 C, 1-4	18. examine observational data and draw a conclusion based on that data; forecast future observations based on previous observations, measurements, and inferences	Knowing, Applying, Integrating	

STATE BOARD LEARNER GOALS	GIFTED AND TALENTED LEARNER OUTCOMES	DEVELOPMENT AND CONCEPT EMPHASIS	TEST ITEM BANK
C, 1, 3	19. compare and contrast the process that was used in an investigation in a science class with the process that was described in a published research report	Applying, Integrating	
A, 7 C, 1-3	20. demonstrate ability to make logical, verifiable explanations for something observed or inferred	Applying, Integrating	
A, 7 C, 1-3	21. define, identify, manipulate variables, understand that variables influence the outcome of an investigation.	Applying, Integrating	
A, 5 C, 1, 2	22. develop and use statistical statements about collections of data such as mode, mean, median, range and deviations; use data to make inferences, predictions, and hypothesis.	Applying, Integrating	
B, 5 C, 1-3 I, 4	23. employ the process skills of science to solve open-ended problems, to gain new knowledge about the universe; and to improve the well-being of humankind	Applying, Integrating, Affective, International	
C, 3 E, 1 H, 3-4	24. understand that science cannot be separated from society nor from persons who comprise that society; understand that society will be affected by the technologies of science	Knowing, Multicultural, Gender Fair, International	
A,7 C,4	25. demonstrate the ability to react to science-technology-society interactions in a variety of intelligent ways	Applying, Integrating	
A, 7 C, 2-3	26. approach a problem through formal sequential reasoning; make formal hypotheses that include possible causes and predict possible outcomes	Applying, Integrating	
C, 3	27. use mathematical relationships in making conclusions	Knowing, Applying	
B, 3 C, 1-3	28. distinguish between science knowledge and personal opinion and/or belief	Knowing, Applying, Integrating, Affective	
A, 7 B, 1, 3	29. know and experience that science is a creative human endeavor similar to the pursuit of art, music, or literature	Integrating, Affective	
B, 9, 11 J, 2, 5 M, 2, 4	30. develop an intellectual and career interest in science and technology	Applying, Integrating, Affective	

STATE BOARD LEARNER GOALS	GIFTED AND TALENTED LEARNER OUTCOMES	DEVELOPMENT AND CONCEPT EMPHASIS	TEST ITEM BANK
	Social Studies The student who exhibits or is capable of exhibiting outstanding performance in social studies will:		
B, 2, 5, 10, 13, 14	1. exhibit mastery and achieve a greater proficiency in social studies as defined by *Model Learner Outcomes for Social Studies Education*, Minnesota Department of Education	Knowing, Applying, Integrating	
B, 13 C, 1 E, 1-3, 4, 6 H, 1	2. identify the characteristics of leaders in diverse cultures and understand how leadership roles emerge from cultural values and beliefs	Knowing, Applying, Integrating, Affective, Multicultural, Gender Fair, International	
B, 13 C, 1 E 1-4, 6-8	3. examine institutions or groups, construct a schematic to represent the power and influence patterns in a given situation and develop a possible course of action to impact change	Applying, Integrating, Affective, Multicultural, Gender Fair	
A, 7 C, 1, 3 B, 13	4. identify the characteristics of eminent leaders of both genders and representing different cultures, analyze the impact of gender and culture on the development of the leader	Knowing, Applying, Integrating, Affective, Multicultural, Gender Fair, International	
B, 5 C, 4 K, 2	5. employ creative processes to develop an idea or innovation that will positively impact the social, political, or economic life of the community	Applying, Integrating, Multicultural, Gender Fair, International	
A, 7 B, 7 C, 1-4 H, 3	6. use problem solving skills to develop and test a theory to explain significant social, political, and/or economic change	Applying, Integrating, Affective, Multicultural, Gender Fair, International	
B, 1 E, 1 J, 4, 6	7. recognize the strengths of a preferred learning style and employ strategies to capitalize on strengths of self and others; develop adaptive strategies when working in a non-preferred style	Knowing, Applying, Integrating, Affective	
C, 1 D, 2	8. recognize the interrelatedness of systems in a broad context of study (science, music, etc.) and develop analogies to describe these relationships	Knowing, Applying, Integrating	
C, 1-3	9. chart the scope of a difficult problem over time and predict the factors likely to impede decision making	Applying, Integrating	
C, 1, 3-4 G, 1-3	10. reconstruct a conflict situation, evaluate the beliefs, values, and points of view reflected by the parties involved, and demonstrate behaviors which resolve or reduce conflict	Applying, Integrating, Affective, Multicultural, Gender Fair, International	

STATE BOARD LEARNER GOALS	GIFTED AND TALENTED LEARNER OUTCOMES	DEVELOPMENT AND CONCEPT EMPHASIS	TEST ITEM BANK
A, 7 C, 1-, 3 H, 1	11. identify a global problem or concern (past, present, future) and construct a model to illustrate interrelated areas	Applying, Integrating, Affective, International	
A, 2-4, 7 C, 4 I, 5	12. develop a method to communicate about a social problem to raise awareness and encourage action	Applying, Integrating, Affective, Multicultural, Gender Fair, International	
C, 4 H, 2-4	13. create a symbolic representation of self, community, or humankind	Integrating, Affective, Psychomotor	
A, 7 C, 1-4	14. identify relevant sub-problems when presented with a multifaceted problem and state a problem to solve	Applying, Integrating	
C, 1-4	15. use several problem-solving approaches and models	Applying, Integrating	
H, 1-4	16. study eminent researchers, their characteristics and processes employed.	Knowing, Applying, Integrating, Affective, Multicultural, Gender Fair, International	
	Visual/Performing Arts		
	The student who demonstrates an outstanding ability to discuss, perform or create art, music, theatre, and/or dance will:		
A, 8 B, 8 C, 5 L, 1	1. exhibit, achieve, and master a greater proficiency in art, music, drama and/or dance as defined by *Model Learner Outcomes in Art, Music, Language Arts and Physical Education*, Minnesota Department of Education	Knowing, Applying, Integrating	
C, 1 D, 2 E, 5	2. evaluate the functions of art, music, theatre, and/or dance which influence the beliefs, attitudes, feelings, and behaviors of self and others	Applying, Integrating, Affective, Multicultural, Gender Fair	
B, 8 C, 4	3. develop an original work or arrange an existing work of art which integrates social and political communication functions of art, music, theatre, and/or dance	Applying, Integrating, Affective, Psychomotor, Multicultural, Gender Fair, International	
C,1, 3 H, 2-3	4. become aware of the difference between novice/expert discrimination processing and apply understanding to the production, creation and evaluation of art, music, theatre, and/or dance	Knowing, Applying, Integrating, Affective, Psychomotor	

STATE BOARD LEARNER GOALS	GIFTED AND TALENTED LEARNER OUTCOMES	DEVELOPMENT AND CONCEPT EMPHASIS	TEST ITEM BANK
A, 7 B, 13 C, 1, 3 H, 1	5. assess the plurality of cultures, styles, and periods in order to value and respect the dependent and interdependent qualities of world art, music, theatre, and/or dance	Knowing, Applying, Integrating, Affective, Multicultural, Gender Fair, International	
C, 1-5 H, 1	6. investigate real community and global issues and develop a plan that uses art, music, theatre, and/or dance to address issues and promote desired changes	Applying, Integrating, Affective, Psychomotor, Multicultural, Gender Fair, International	
A, 8 B, 9 C, 4 D, 1, 2 F, 2	7. work collaboratively with others to learn the importance of productive and satisfying relationships between designers, producers, and consumers of a work when striving to accomplish a goal	Applying, Integrating, Affective, Multicultural, Gender Fair	
A, 7 C, 1-5	8. identify characteristics, strategies, and tools of other disciplines and creatively apply them to art, music, theatre, and/or dance	Knowing, Applying, Integrating, Affective, Psychomotor, Multicultural, Gender Fair, International	
C, 1-4	9. analyze the aesthetic origins and traditions of popular, classical, and world art, music, theatre, and/or dance in order to predict the directions and impact that these traditions will have on future societies	Applying, Integrating, Multicultural, International	
B, 8 C, 1, 3 E, 1-3, 5	10. explain how personal value systems affect the ways in which art, music, theatre, and/or dance are perceived in order to make aesthetic judgments	Applying Integrating, Affective	
A, 8 B, 8 I, 2 J, 1, 3, 5	11. realize personal abilities, set realistic objectives, exercise self-discipline, to reach goals in art, music, theatre, and/or dance	Applying, Integrating, Affective	
A, 8 B, 8 C, 4,5 I, 1, 2	12. design, create, produce, or perform a work which is an individual expression reflective of the student's personal beliefs, values, feelings, and attitudes	Applying, Integrating, Affective, Psychomotor	
A, 7, 8 B, 8 C, 4, 5	13. produce works of art which reflect the formal and expressive elements of art, music, theatre, and/or dance	Applying, Integrating, Affective, Psychomotor	

STATE BOARD LEARNER GOALS	GIFTED AND TALENTED LEARNER OUTCOMES	DEVELOPMENT AND CONCEPT EMPHASIS	TEST ITEM BANK
A, 1, 7 C, 1, 3 K, 3	14. study the life and works of creative, contemporary producers of art and identify how they use their art to cope with change and conflict	Knowing, Applying, Integrating, Affective, International	
A, 8 B, 8, 13 C, 3	15. understand the impact that art, music, theatre, and/or dance may have as a communication tool	Knowing, Applying, Integrating, Affective	
B, 8 C, 1-5	16. demonstrate the use of critical thinking skills in the production, creation, or evaluation of a work in art, music, theatre, and/or dance	Applying, Integrating	
B, 3, 8 I, 1-2 J, 1, 3, 5, 6	17. develop increased self-discipline so that interest and motivation is sustained and personal and professional competencies are increased in art, music, theater and/or dance areas.	Applying, Integrating, Affective, Psychomotor	

STATE BOARD LEARNER GOALS	GIFTED AND TALENTED LEARNER OUTCOMES	DEVELOPMENT AND CONCEPT EMPHASIS	TEST ITEM BANK
	Outcomes for Student-based Services		
	As a result of participation in small group sessions with gifted/talented peers to develop and pursue areas of interest and aptitude, the student will:		
B, 1 I, 1, 2	1. sustain or increase motivation to learn	Affective	
B, 1	2. develop an openness to new areas of learning	Affective	
B, 1	3. understand and appreciate the conditions and climate necessary for investigative and productive work	Knowing, Applying, Integrating, Affective	
B, 1, 2, 5 F, 3 J, 1, 3, 5 M, 5	4. contribute to the community or the talent area	Applying, Integrating, Affective	
B, 1 F, 2 I, 5 J, 1,3,5	5. show increased proficiency in investigative and interpersonal skills as an independent learner or as a member of a collaborative group	Knowing, Applying Integrating, Affective, Multicultural, Gender Fair	
A, 7 K, 2	6. develop and sustain tolerance for ambiguity	Affective	
E, 1, 2, 4, 6-8	7. accept other points of view	Affective, Multicultural, Gender Fair, International	
A, 7, C, 2 I, 1 J, 4	8. state and support a personal view	Applying, Integrating, Affective	
C,1, 3 D, 2 H, 1	9. demonstrate the ability to recognize the interrelatedness of important ideas.	Integrating, International	
	As a result of individual instruction in a content or talent area, the student will:		
B, 1 I, 1, 2	1. reinforce his or her interest in the content/talent area and increase motivation to pursue the talent area independently	Affective	
A, 7 B, 1 C, 1-5	2. become more proficient in the content/talent area	Knowing, Applying, Integrating	

STATE BOARD LEARNER GOALS	GIFTED AND TALENTED LEARNER OUTCOMES	DEVELOPMENT AND CONCEPT EMPHASIS	TEST ITEM BANK
A, 7 B, 1	3. acquire knowledge and appreciation for the scope and dimensions of the content/talent area	Knowing, Applying, Integrating	
B, 1 A, 7	4. be better able to communicate with an expert in the content/talent area	Knowing, Applying, Integrating	
B, 1 C, 4 J, 1, 3, 6 M, 5	5. learn how to pursue the content/talent area independently	Affective	
C, 1, 3 D, 2	6. recognize the interrelatedness between the content/talent area and other fields	Integrating, Multicultural, Gender Fair, International	
B, 9, 11 J, 5 K, 5 M, 2, 5, 6	7. become aware of the additional preparation necessary to become an expert in the content/talent area	Knowing, Applying, Integrating, Affective	
B, 1 C, 4 J, 1, 3, 5 M, 2, 4	8. expand awareness of the avenues in which the content/talent area might be used or enjoyed.	Integrating, Affective	
	As a result of exploratory work or field experiences with a mentor, the student will:		
M, 1-2, 4 5	1. have been intensely involved in learning activities in a real-work situation	Applying, Integrating	
J, 1, 3, 6	2. have learned to set expectations for self-directed experiences	Applying, Integrating, Affective	
A, 7 C, 4 J, 1, 3, 6	3. have demonstrated the ability to use human and material resources to actively seek new experiences in an area of interest	Applying, Integrating, Affective	
A, 7 C, 1-4	4. have increased proficiency in the skills and processes in an area of interest	Applying, Integrating	
A, 3-4, 7 B, 9 J, 2 K, 5 M, 4	5. have developed an awareness of educational and career opportunities in an area of interest.	Affective	

STATE BOARD LEARNER GOALS	GIFTED AND TALENTED LEARNER OUTCOMES	DEVELOPMENT AND CONCEPT EMPHASIS	TEST ITEM BANK
	As a result of the interaction of the student with gifted/talented peers to increase self-understanding and development of interpersonal skills, the student will:		
F, 2-3 G, 1-3 K, 1-3	1. develop interpersonal skills such as communication, interviewing, discussion, and conflict reduction	Knowing, Applying Integrating, Multicultural, Gender Fair, International	
E, 1-2, 4, 8 F, 2-3 G, 1-3	2. acquire group process and interaction skills	Knowing, Applying, Integrating, Affective, Multicultural, Gender Fair, International	
C, 1-4	3. practice creative thinking and problem solving	Applying, Integrating	
B, 4 I, 1-2, 4-6	4. be aware of the implications and problems of being gifted and talented.	Affective	
	As a result of independent work (more advanced and long-term study in a content or talent area), the student will:		
C, 1-4 J, 6 K, 2	1. react and respond to the challenge of ideas and/or experience provided	Applying, Integrating, Affective	
A, 7 B, 1	2. acquire knowledge and appreciation for the talent or interest area	Knowing, Applying, Integrating, Affective	
A, 7 C, 1-4	3. increase proficiency in the talent or interest area	Knowing, Applying, Integrating, Affective	
J 1, 3	4. seek additional experiences to be productive in the talent or interest area.	Applying, Integrating, Affective	

Transposing Model Learner Outcomes into Curriculum and Services 4

Matching Services to Curriculum-based Outcomes

Matching Services to Student-based Outcomes

Integrated Programs

Differentiated Planning Guides

Matching Services to Curriculum-based Outcomes

Curriculum-based services are curricular modifications which are made in the course content, the instructional strategies employed by the teacher and in the products required of the students. These services occur through a curriculum which has been modified to meet the needs of gifted and talented students during the regular course of instruction.

Modifications to the curriculum for gifted and talented learners involve a three-step process:

1. Credit is given for prior learning.

2. There is a reduction (compacting) of tasks and/or replacement of "regular" tasks with more challenging study.

3. New experiences or activities are constructed and these activities capitalize on student strengths.

Mastery of the learner outcomes identified in each content area is considered a basic educational requirement for gifted and talented learners. The natural extension or enrichment of these outcomes is a result of early mastery of these outcomes by the student as compared to his/her age/grade peers.

Curriculum-based service is organized through the "regular" course of instruction. Therefore, advanced or enriched curriculum units or activities should be available to replace existing curriculum. Enriched curriculum may be developed using the Planning, Evaluating, and Reporting (PER) Cycle.

During the PER review of each content area, the following may be investigated:

1. Acceleration/enrichment policy (examination of ceilings on student learning)

2. Examination of textbooks to determine if the text provides diagnostic tools and/or enrichment activities more suitable to able learners in a content area

3. Evaluation of existing curricula or the development of new curricula which includes the basic modifications described later in this chapter

Organizing for Curriculum-based Services

The following program design components are often used to organize the delivery of curriculum-based services to gifted and talented learners:

1. **Acceleration.** Students may be accelerated in a talent area. This acceleration is usually accomplished through: early entrance to kindergarten, grade acceleration, subject acceleration, or early graduation. The primary change for the school involves waiving "grade/age-level" requirements due to the student's advanced mental age or talent development. In addition, an entry-level course of study may be waived due to the student's advanced abilities. If acceleration is provided through individual instruction (tutor), this is a student-based service.

2. **Self-contained, full-day classes/schools** provide regular and consistent curriculum modification. This may be organized as a "school within a school" program or a magnet school for gifted and talented learners. These classes offer differentiated curriculum by content or talent area. In addition, academic and/or aesthetic challenges are frequently supported by the subject or talent area specialist.

3. **Advanced classes** are offered by subject area and may be organized as an advanced section or an interdisciplinary class. The hallmark of these classes is usually the accelerated pace and accelerated/enriched opportunites which are offered. In addition, academic/aesthetic challenges are frequently supported within the context of the advanced class.

4. **Temporary, flexible groups** (cluster of three to seven identified students) within the heterogenous classroom are organized to provide for a "critical mass" of students needed to form an instructional group. These groups provide opportunities for gifted/talented students to meet with intellectual peers, yet still participate in heterogenous groups. The teacher organizes instructional groups responding to the academic or aesthetic needs of students. Classroom grouping strategies are used to provide a fluid and flexible arrangement of students.

Often, mastery testing or other diagnostic procedures are used to determine the "fit" of the student with the regular curriculum. Assigned tasks are reduced and replaced with challenging work. The emphasis is on "instead of" or replacement of the regular curriculum with more advanced content or skill instruction.

5. **Supplemental enrichment.** Temporary "send-out" groups are established to meet outside of the usual classroom structure and offer experiences which broaden or accelerate the student's knowledge, skills, or interests. Generally, the resource teacher or volunteer provides activities responding to students' interests and talents. Reduction

of assignments in the regular classroom is encouraged. This allows the student to "buy time" to participate in send-out activities.

Some "send-out" groups are actually temporary, flexible groups designed to provide advanced instruction (accelerated mathematics for sixth grade students who have completed the outcomes), but are considered to be a send-out program because the students leave the classroom for instruction.

Supplemental programs differ from temporary instructional groups. Supplemental programs do not necessarily impact on the student's regular instructional program, but may develop the student's interests or provide instruction in advanced content or skills which enhance student achievement or encourage self-directed learning. In some instances, resource teachers are able to offer activities which are natural extensions of the regular curriculum.

Modifying the Curriculum

Modifications to learner outcomes in each content area are accomplished through:

1. Pace/Placement of Content or Skills

The modification of the pace/placement of the student's learning activities in relation to the regular learner outcomes is accomplished through the following systematic modifications to instruction:

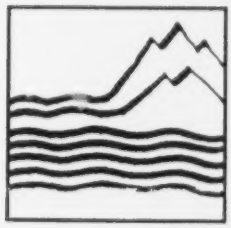
a. introduce content/skills at a rapid pace and reduce examples
b. reduce practice activities
c. accelerate by grade/subject content

For example, a third-grade student shows mastery of the skills of multiplication and the assignments for this unit are eliminated. A new unit on variables is introduced, where the notion of probability is explored by the student. This activity relates to the following learner outcomes in mathematics:

3. *develop competencies in standard mathematical topics in greater depth*

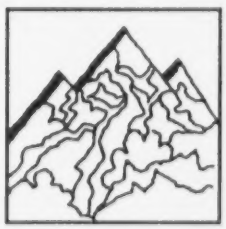
4. *develop knowledge of non-standard mathematical content (assuming a standard third-grade level placement)*

Modifying the Curriculum

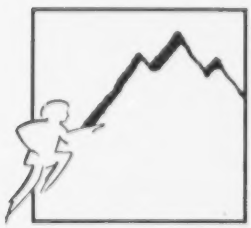


Pace/Placement of Content or Skills. The modification of pace/placement of the student's learning activities in relation to the regular learner outcomes is provided, allowing students to move more quickly through instructional activities and study advanced content.

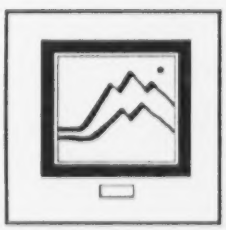
Theme/Interdisciplinary Study. Students explore broad content which is arranged so that there is an emphasis on a theme or larger idea used in the organization of the content (systems, change, revolution).



Depth/Breath of Content or Skills. Students explore the depth/breadth of the content or skills where concepts are examined in greater detail or complexity resulting in a broad or more thorough notion of the concept.



Professional Thinking. Students use professional thinking skills which involve the use of integrated processes (thinking skills and tools, techniques or instruments) of an expert in a given field.



Quality Products. Students are involved in the creation of quality products when new knowledge or processes are acquired and used to developed original products in a variety of formats. Student products often reveal sophistication, novelty or complexity and may be used as a tool to learn or as a verification of learning.

2. Theme/Interdisciplinary Study

Students explore broad content which is arranged so that there is an emphasis on a theme or larger idea used in the organization of the content (systems, change, revolution). This is accomplished through the following systematic modifications to instruction:

a. identification of a major theme or process skill; incorporation of theme in the instructional activities; evaluation of the student's understanding of the theme or use of process skill

b. use of interdisciplinary multiple content areas in the design of student activities

For example, eighth-grade students who are talented in the visual arts study the use of "art as a social commentary." These students develop a presentation which illustrates the use of art as a method of social commentary during a selected time period (war, depression, hunger).

This activity relates to the following learner outcomes in art, music, theatre, dance:

5. *assess the plurality of cultures, styles, and periods in order to value and respect the dependent and interdependent qualities of world art, music, theatre, and/or dance*

14. *study the lives and works of creative, contemporary producers of art and identify how they used their art to cope with change and conflict*

3. Depth/Breath of Content or Skills

Students explore the depth/breadth of the content or skills where concepts are examined in greater detail or complexity resulting in a broad or more thorough notion of the concept. This is accomplished through the following systematic modifications to instruction:

a. emphasis on resource-based learning, where a variety of print and non-print media are used

b. development and use of research skills

c. application of student's understanding of concepts and/or use of an advanced processes.

For example, first-grade students with advanced reading ability exhibit mastery of basic skills for a given unit in the basal reader. A unit on mythology is planned in which students are introduced to mythological characters. They design their own character and explain a natural occurrence.

This activity relates to the following learner outcome in language arts:

3. *assume the role of a creative producer in a language arts field through such aesthetic endeavors as writing, speaking, literary analysis, and drama.*

4. Professional Thinking

Students use expert processing skills which involve the use of integrated processes (thinking skills and tools, techniques, or instruments) of a professional in a given field. This is accomplished through the following systematic modifications to instruction:

a. students conduct experiments; work with professional tools; develop products as professionals (write poetry, conduct original research, direct and produce a videotape)

b. students are guided by a professional (artist-in-residence, etc.).

For example, tenth-grade students with talent in science are guided by a visiting scientist from Minnesota Mining and Manufacturing Corporation. Students participate in the development of plans to grow crystals in an upcoming shuttle launch.

This activity relates to the following learner outcomes in science

26. *employ the process skills of science to solve open-ended problems, to gain new knowledge about the universe and to improve the well-being of humankind.*

32. *know and experience that science is a creative human endeavor similar to the pursuit of art, music,or literature*

5. Quality Products

Students are involved in the creation of quality products when new knowledge or processes are acquired and used to develop original products in a variety of formats. Student products often reveal sophistication, novelty, or complexity, and may be used as

a tool to learn or as a verification of learning. This is accomplished through the following systematic modifications to instruction:

a. product format is varied and involves student choice

b. advanced and sophisticated production techniques are introduced (desktop publishing, etc)

c. students' products are shared with an appropriate audience and/or evaluated by a professional.

For example, fifth- grade students with creative talent may be introduced to the capabilities of the computer in the design of attractive presentation materials. These students might use a program titled *Fantavision* ™ and create an animation sequence on the computer.

This activity relates to the following learner outcomes in communications:

10. *pursue advanced areas of learning in areas of special interest and talent in the communication field*

13. *become a creative producer in the use of media technology (computer, photography, radio, television), as communication tools*

Providing Curriculum-based Service on a Regular and Consistent Basis

The matching of individual students with appropriate instructional activities requires knowledge of the student, his or her educational needs, preferred learning style, the outcomes to be mastered, the logical extensions or enrichment in the field, and the method of delivery. As educational personnel seek to meet the needs of these students, content areas may be systematically examined and new curricula may be devised.

A single, prescribed curricula for gifted and talented learners is not appropriate because the curricula should be responsive to student strengths and interests. A scope and sequence for curriculum-based outcomes is devised through the selection of appropiate outcomes and the development of units/activities which replace the regular curriculum with a more challenging one. In all cases, this curriculum is intended to capture the students' interest and capitalize on student strengths.

Curriculum-based outcomes may be used as a basis for examining the following: textbook adoption, assignments, materials use, instructional methods, organization of content, ceiling or acceleration policies, and/or staff development activities. Initially, a critical review of the avenues already available to gifted and talented learners in each discipline is required. New curricular options are then developed. These steps require a commitment to the long-term development of appropriate curricula for gifted and talented students.

Matching Services to Student-based Outcomes

Student-based services are modifications to the student's program of learning which capitalize on the student's ability. They offer an individualized plan designed to promote the development of the student's full potential. These services occur after an examination of the student's abilities and interests and are designed to complement and extend the student's educational experience. Student-based services are a more intensive level of service and require a more personalized program of study.

A classroom or resource teacher may be involved in the planning, facilitation, and/or delivery of these services. A resource teacher may enable the classroom teacher to provide services which are difficult or impossible to provide through the regular course of instruction and in the regular classroom setting. Student-based outcomes apply to a variety of content or talent areas and relate to the type of service provided.

Organizing for Student-based Services

Delivery of student-based services is accomplished through the following:

1. **Regularly scheduled meetings.** Learners with similar talents or interest areas are organized in small groups on a flexible basis.

2. **Student-teacher conferences.** A student meets with the classroom or resource teacher to confer on his or her instructional program and/or affective concerns.

3. **Individualized program management.** Educational personnel develop and supervise arrangements which enable students to participate in independent work in a specific content area. These arrangements may involve the development of agreements with other educational personnel, community volunteers, private, and public institutions (education, business, public service, etc.), to facilitate independent work.

4. **Student advocacy.** The classroom or resource teacher serves as a student advocate by communicating the needs of individual students to other educational personnel, organizing and facilitating student staffings in the development of an individual learning plan, and monitoring the student's progress over time.

Providing Student-based Services

The following describes the most common types of student-based services:

1. **Small group sessions.** Students participate in small groups sessions where opportunities are provided for gifted/talented peers to interact and pursue common areas of interest and aptitude. A key factor in the development of small group sessions is the participation of the students in the design of activities and the selection of areas of study. This may be accomplished through:

a. small group sessions are organized for in-depth study of high interest topics (futures, study of creative people, environmental pollution)

b. small group sessions are organized for skill development (advanced problem solving, research skills, time management, thinking skills).

For example, students who exhibit exceptional creative behavior are selected to participate in a seminar designed to develop more flexible and original thinking through the use of problem-solving strategies.

This activity relates to the following student-based outcomes:

5. show increased proficiency in investigative and interpersonal skills as an independent learner or as a member of a collaborative group

6. develop and sustain tolerance for ambiguity

2. **Individual instruction.** Students meet with a content or talent area specialist who provides an instructional program which responds to the student's exceptional abilities. This may be accomplished through:

a. regular sessions with a content or talent area specialist where academic credit is awarded for advanced student work (acceleration of grade/age-level curriculum)

b. intermitent sessions with a content or talent area specialist are arranged on a flexible basis to replace the regular curriculum (compacting on short-term basis).

For example, a student who has exceptional ability (three years above grade level), in mathematics receives weekly instruction from a math tutor beyond the grade-level outcomes.

This activity relates to the following student-based outcomes:

2. *become more proficient in the talent area*

5. *learn how to pursue the talent area independently*

3. **Mentorships.** Students work with a mentor or field-related expert to engage in exploratory work and/or field experiences-related student interest and talent areas. These experiences are designed to broaden the student's interest areas or provide early experience which may assist the student in the academic and career planning activities. This may be accomplished through:

a. short-term informational interviewing and "career shadowing"

b. long-term on-site field work and the development of a student project applying professional skills of the field

c. intermittent exchanges with interest area mentor who shares professional experiences and/or expertise related to the content or talent area and promotes interest and commitment to the field

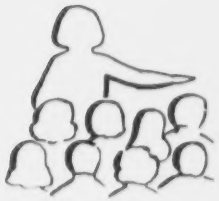
For example, a student with a well-developed science interest explores the work of a veterinarian through a mentorship and learns to assist in a simple operation or conduct a study.

This activity relates to the following student-based outcomes:

1. *have been intensely involved in learning activities in a real-work situation*

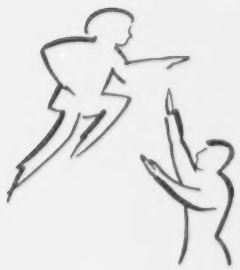
4. *have developed an awareness of educational and career opportunities in an area of interest*

Providing Student-based Services



Small group sessions. Students participate in small groups sessions where opportunities are provided for gifted/talented peers to interact and pursue common areas of interest and aptitude. A key factor in the development of small group sessions is the participation of the students in the design of activities and the selection of areas of study.

Individual instruction. Students meet with a content or talent area specialist who provides an instructional program which responds to the student's exceptional abilities.



Mentorships. Students work with a mentor or field-related expert to engage in exploratory work and/or field experiences related student interest and talent areas. These experiences are designed to broaden the student's interest areas or provide early experience which may assist the student in the academic and career planning activities.

Affective Development. Students interact with gifted and talented peers to increase their self-understanding and development of interpersonal skills.

Independent Work. Students are involved in a more advanced and long-term study in a content or talent area. These unique learning opportunities are not available through other program services or the curriculum sequence. Independent work is tailored to fit student strengths and interests. Generally, independent work is arranged or supervised by a classroom teacher, resource teacher or content area specialist.

4. **Affective Development**. Students interact with gifted and talented peers to increase their self-understanding and development of interpersonal skills. This may be accomplished through:

a. small group sessions which are responsive to student issues such as: stress management, peer pressure, perfectionism, etc.

b. peer counseling programs which are organized by guidance personnel

c. student referral to district or outside service agencies where appropriate

d. development of instructional activities which focus on affective issues as a component of an individual plan

For example, students have the opportunity to meet regularly with their intellectual peers and discuss issues related to perfectionism as it impacts student achievement and self-esteem.

This activity relates to the following student-based outcomes involving affective development and guidance:

1. develop interpersonal skills such as communication, interviewing, discussion and conflict resolution

4. be aware of the implications and problems of being gifted and talented

5. **Independent Work.** Students are involved in a more advanced and long-term study in a content or talent area. These unique learning opportunities are not available through other program services or the curriculum sequence. Independent work is tailored to fit student strengths and interests. Generally, independent work is arranged or supervised by a classroom teacher, resource teacher, or content area specialist. This may be accomplished through:

a. the arrangement of independent learning such as: correspondence courses, long distance opportunities through teleconference, interactive cable, electronic network, etc.

b. the supervision of independent projects which allow the student to do advanced work, pursue an interest area and/or develop an original product (this may replace the regular curriculum or be independent of class work)

c. collection and dissemination of information on independent opportunities

For example, a student who demonstrates leadership ability attends a peace conference. The student then requests to work on a school peace campaign and establishes a network of schools who are concerned with this issue. A social studies specialist supervises the project.

This activity relates to the following student-based outcomes:

1. *react and respond to the challenge of ideas and/or experience provided*

2. *seek additional experiences to be productive in the talent or interest area*

Integrated Programs

Integrated programs provide a "core" of differentiated curriculum and individualized extensions of the student's ability in a content or talent area. Some examples of integrated programs are: School-wide Enrichment Model (Renzulli, Reis), District-developed Programs, International Baccalaureate and the Autonomous Learner Program (Betts). As a result, outcomes are selected for these learners from both curriculum and student-based outcomes.

For example, the International Baccalaureate Program (IB) offers eleventh-and twelfth-grade students the opportunity to receive a certificate in a content area or a diploma which is equivalent to one year of college work. The diploma requirements include independent work and a community service component. IB students attend classes where curriculum is differentiated. Additionally, students are supervised by an IB coordinator who may guide their independent work and facilitate student involvement in a community project.

Integrated programs may be categorized according to the broad intent of the program and the student activities which are provided. The following represents three areas of focus which are commonly found in integrated programs:

1. **Content emphasis.** Programs of this type may be organized externally (i.e., International Baccalaureate) or internally through a district-developed program. Speciality focus magnets or accelerated schools in science or mathematics are examples of integrated programs with a content emphasis.

Accelerated and enriched curricula is provided and individual instruction may also be used. Many elementary "resource" programs provide an accelerated curricula in one or several content areas and also provide student-based services such as independent study, mentorships, or student seminars.

2. **Talent emphasis.** Programs of this type are centered on the development of the individual in a talent area through a total school program or specialty magnet school. A governor's school for the arts has a specific focus and weaves the concepts and skills of the talent area into the total curricula. In addition, students are provided with an individual instruction in the talent area. Collaborative work is encouraged and the message of the school is that the talent area is valued and promoted.

3. **Student Affect.** Programs of this type may be organized externally and replicated in local districts (Autonomous Learner Program or the School-wide Enrichment Model) or internally through a district-developed program. Many "resource" programs provide an accelerated curriculum with an emphasis on affective issues, time management strategies, exploration of interest areas and production techniques. Student-based services may involve the supervision of independent or collaborative work. Students may select independent work or be required to complete independent work on a periodic basis.

Integrated programs build a bridge between the student's classroom experiences and the development of the student's content or talent area speciality. A blend of both curriculum and student-based services is offered by schools when a long-term effort is focused on the dual nature of service to gifted and talented students.

Differentiated Planning Guides

Differentiated planning guides may be used to develop a learning plan which may provide for the modification of the regular curriculum or the development of a personalized learning plan for an individual student. A differentiated planning guide provides a method of recording the following information: assessment data regarding student abilities/interests; intended modifications which are planned; the anticipated actions which are expected when the student is engaged in work; and the methods of evaluation to be used at the conclusion of the plan. An example of a differentiated planning guide are for curriculum and student-based service is shown on the next few pages. Examples of differentiated planning guides for several areas of giftedness are provided in the Appendix.

Figure 3

Student Profile

Name: _____ Grade _____

School: _____ Homeroom Teacher: _____

Parents: _____

Address: _____

Telephone: (home)_____ (work) M _____ F _____

ABILITIES

ACHIEVEMENT Grades

Area	%	Grades

APTITUDE %

Verbal	
Quantitative	
Nonverbal	

INTELLIGENCE TESTING:

INTERESTS/TALENT AREA:

RECOMMENDATIONS:

RECORD OF PARTICIPATION IN GIFTED SERVICES:

Name:_____ **Content/Talent Area:** _____

Teacher:_____ **Grade:** _____

Conditions for Curriculum-based Services:

1. **Give credit for prior learning**
2. **Reduce or replace regular tasks with challenging tasks**
3. **Design an advanced outcome(s) and include three of the following areas:**

Outcome: _____

Advanced **PACE/PLACEMENT** of content or skills

- ❑ Content/skill instruction at a rapid pace; reduce examples; reduce practice activities:
- ❑ Accelerate by grade/content area:
- ❑ Eliminate through mastery testing

Emphasis on **THEME/INTERDISCIPLINARY** study

- ❑ Incorporation of theme in the design of student activities:
- ❑ Interdisciplinary emphasis (list subject areas):

Extension of the **DEPTH/BREADTH** of the content or skills

- ❑ Advanced/Sophisticated Content/Skills (**DEPTH**)

  Topic(s)/Skill(s):
- ❑ Application of Content/Skills to other Disciplines/Fields (**BREADTH**)

  Discipline(s)/Field(s):
- ❑ Research skills instruction/application

  Research strategies:

  Multiple resources:

  Development of an independent project:

Use of **PROFESSIONAL THINKING**

- ❑ Applies processes/techniques of professionals in the following field(s):
- ❑ Engages in collaborative work with professional:

Develops **QUALITY PRODUCTS**

- ❑ Product format is varied:
- ❑ Advanced and sophisticated production techniques are introduced:
- ❑ Synthesis of original product or process

EVALUATION PLAN

❑ Performance-based evaluation (test, demonstration, speech)

List Criteria:_____

_____

_____

_____

❑ Narrative Summary (journal, report, log of actions)

Entry Format (i.e. weekly, daily); Final Conference Date: _____

❑ Productive Work/Performance (portfolio, final product)

Final Production/Performance Date: _____

❑ Other _____

General Comments:

Parent Signature(s): _____

Teacher Signature: _____

Date: _____ Duration of Plan: _____

Special Thanks...

The idea and the format for a differentiated planning guide using the recommended state criteria was developed by Elaine Chirhart, Becker Public Schools and Debra Lechner, Sartell-St. Stephen Public Schools.

Figure 5

Differentiated Planning Guide

Name:_____ **Content/Talent Area:** _____

Teacher:_____ **Grade:** _____

Conditions for Student-based Services:

1. **Plan capitalizes on student strengths/interest areas**
2. **Regular work is reduced to "buy time" for participation in services**
3. **Design an advanced outcome and include one or more of the following areas:**

Outcome: _____

AFFECTIVE DEVELOPMENT

- ❑ Small group meetings
  Topic:
- ❑ Peer Counseling
  Issues:
- ❑ Referral
  Individual/Agency:
- ❑ Instructional Activities:

INDEPENDENT WORK

- ❑ Learning Goal and Outcome
- ❑ Facilitator/Provider
  - long distance learning
  - correspondence course
  - classroom teacher/specialist
  - other

INDIVIDUAL INSTRUCTION

Topic: Specialist:

Student schedule:

- ❑ Accelerated learning goal/outcome:

  compacted curriculum area:
- ❑ Alternative Learning Goal/Outcome:

SMALL GROUP SESSIONS

- ❑ In-depth Study
  Topic:
- ❑ Skill Development
  Skills:

MENTORSHIP

Field:
Mentor:
Timeline/commitment:

- ❑ Informational Interviewing
- ❑ Career Shadowing
- ❑ Advanced knowledge and/or skill building
- ❑ Field Work
- ❑ Student project
  Learning Goal/Outcome:

EVALUATION PLAN

❑ Performance-based evaluation (test, demonstration, speech)

List Criteria:_____

_____

_____

❑ Narrative Summary (journal, report, log of actions)

Entry format (i.e. weekly, daily); Final Conference Date: _____

❑ Productive Work hours/Performance (portfolio, final product)

Final Production/Performance Date: _____

❑ Other _____

Comments:

Parent Signature(s): _____
Teacher Signature: _____
Date: _____ Duration of Plan: _____

Assessment and Evaluation of Student Achievement 5

Purposes of Assessment and Evaluation

Tools and Techniques

Types of Complex Outcomes and Examples

Summary

Purposes of Assessment and Evaluation

Gifted and talented students are engaged in a more intensive and advanced study of a content or talent area than their age peers due to their demonstrated ability or potential, intense interest and motivation to learn. One of the educational differences between these learners and their age peers is in the intensity, sophistication and complexity of the tasks which may be offered to challenge their abilities. The student's prior learning, abilities, and interests become the seed for the development of new lessons and experiences.

As a result of these differences, the selection and assessment of outcomes must match the intensity, sophistication, and complexity of the work/study likely to be encountered by these students. Useful assessment tools which gather data regarding complex behaviors may be employed. These tools may measure the acquisition and use of professional thinking strategies and/or the increasing sophistication of the student in the understanding of abstract concepts.

The assessment and evaluation of student achievement may require that a combination of assessment tools be employed. This use of multiple tools adds to the reliability of the evaluation process by providing corroborative data. For example, it may be necessary to assess the way in which a young mathematics student identifies and selects several problem-solving strategies to solve a word problem. A test of the student's computational abilities may be inappropriate. The use of the self-report where the student "talks out loud" during the work stages, combined with samples of student work, may be very useful in the assessment of problem-solving abilities.

Due to the sophistication and time consuming nature of the assessment and evaluation process, the assessment tools used and the evaluation of student achievement is intended to match an outcome and measure major "chunks" of learning to be acquired over time. The selection of a limited number of outcomes to be evaluated is essential.

Outcomes and assessment tools should be selected during the initial planning phases to ensure that procedures are established so that data may be collected at appropriate intervals. This will result in an evaluation where meaningful information about student progress is reviewed and the future direction of student work may be determined.

Information about the general nature of the assessment and evaluation of complex outcomes is followed by a description of some suggested reference tools.

What is assessment? How does assessment differ from assigning a grade and the evaluation process?

The assessment process involves the collection and quantification of data. The act of grading is the application of a mark. The purpose of the evaluation process is to provide qualitative feedback regarding student performance.

What is the purpose of assessment?

The purpose of assessment is to collect information and measure student progress over time and to develop a course of action for future learnings. Assessment tools are selected which seek to measure whether qualitative changes have occurred in concept development, skill acquisition, or changes in behaviors, attitudes, or aspirations. Assessment data may be additionally used to evaluate the effectiveness of instructional techniques and program goals.

Who is involved in the assessment?

There are at least two participants involved in the assessment process: the individual(s) and a trained observer. Trained observers may be: students, teachers, community members, and/or evaluation experts.

Tools and Techniques

What are some assessment tools/techniques which may be used to evaluate complex learner outcomes?

1. Attitude/Aspiration Inventory
2. Narrative Summary
3. Performance-based Testing
4. Examples of Productive Work
5. Self-Report
6. Reflective Interview/Journal

What are some procedures, strengths, limitations, and conditions for use of the suggested assessment tools and techniques?

Attitude/Aspiration Inventory

An attitude/aspiration inventory is a survey which is designed to elicit information from the respondant regarding a change in attitudes, behaviors, beliefs, values, or aspirations.

Procedure:

1. Select or construct an inventory tool designed to show a range of responses

2. Pre-test using the inventory tool before proceeding with a course of action

3. Administer the post-test following the completion of the actions using the same tool

4. Compare results

5. Summarize the findings

Strengths:

1. May show a wide range of responses

2. The tool may be "customized" to yield specific and appropriate information

Limitations:

1. Responses are limited by the structure of the survey instrument

2. Non-standardized inventories may be flawed due to the design of the instrument or student misinterpretation of survey items

3. There may be student bias in responding to the items

4. Standardized items may not be sensitive to yield the specific information required

Conditions:

1. Use the attitude/aspiration survey when information is sought regarding the maintenance or change of attitudes, beliefs, values, or aspirations

2. The attitude/aspiration survey may be used to pinpoint areas of strength and to guide actions for development of future strengths

3. The attitude/aspiration survey may be used to evaluate an individual's or group's disposition toward a specific outcome

Narrative Summary

A narrative summary is written documentation of student progress.

Procedure:

1. Identify the specific areas for assessment and reporting and determine how the key elements can be coded and reported for assessment

2. Determine the method of collection of data over time (log, journal, cognitive mapping, etc.)

3. Prepare a summary report which includes purpose, data, and conclusion

Strengths:

1. The narrative summary is sensitive to the conditions and context of the learning.

2. This tool is sensitive to the stages of individual development and may be tailored to measure outcomes "custom-designed" for individuals

Limitations:

1. The correct use of this tool involves the collection of a large amount of data and requires time and effort to examine and locate the information desired

2. The narrative summary requires consistency in data collection and analysis

3. This tool is sensitive to personal bias

Conditions:

1. The narrative summary is an appropriate tool to assess productive work over an extended period of time

2. The narrative summary may be appropriate where the processes employed by the student may not be evident in a product or where a product is not required

Performance-based Testing

The application of a performance standard is used to measure competency and/or degrees of sophistication of the student while engaged in meaningful tasks through the use of established criteria. Performance-based testing measures both technical proficiency and sophistication in the application of the thoughts, tools, and/or techniques of experts in a field.

Procedure:

1. Devise performance-based criteria and establish the procedures and resources needed for the assessment of student work

2. Measure student work or accomplishment using established criteria

3. Summarize results

Strengths:

1. Allows standards for complex concepts or behaviors

2. Sensitive to the observation and measurement of expert processing

3. May be observed by a variety of trained observers

Limitations:

1. Testing conditions may not be optimal for student performance

2. Conditions may limit the type or sophistication of competencies to be evaluated

Conditions:

1. Use performance-based testing when a level of proficiency must be met and cannot be examined using objective tests

2. Use performance-based testing to gauge the student's abilities in comparison to

"professional standards" and a "bench mark" assessment of the student's level of competency is desired

Examples of Productive Work

An example of a productive work involves the critical review of both the processes employed during the productive stages as well as the final product. Information is collected during the stages of student work through the examination of student journals, logs, sketches, models, diagrams, and discarded work. The final product may be represented through a portfolio, performance, a model, a theory, an invention, or new approach.

Procedure:

1. Determine how samples of student work in progress will be collected (journal, log, calendar, sketches, models, diagrams, discarded works)

2. Where criteria is established initially, design criteria for both the content and the format of the work with the student and share the criteria

3. A productive work may be evaluated without specific criteria or criteria for evaluation may emerge during the evaluation process

4. Provide for the review of the work during the productive process and evaluate the final work

5. Summarize findings

Strengths:

1. The product criteria used to evaluate the productive work is reflective of standards in the field and may be tailored to individual work

2. Areas of strength and areas for improvement may be identified

3. Provides an opportunity to assess both the technical and creative component of productive work

4. Is a wholistic approach to productive work and replicates actions in the field

Limitations:

1. Criteria may not be sensitive to the final product outcome (theproduct format may change requiring development of new criteria)

2. Application of criteria may be subject to bias

3. Samples of work in progress may be an incomplete documentation of processes employed by the student during the productive stages

4. The evaluation of the productive work relies upon an experienced or field-related expert observer

Conditions:

1. May be used to evaluate a time-and work-intensive product (a major work)

2. Develops student awareness of standards in the field

Self-Report

A self-report is a student-generated report of what processes and techniques are employed **while the student is engaged in productive work.** This self-report is reported to an observer or recorded in written form. This process is also referred to as "thinking aloud," and should emphasize problem-solving strategies and approaches used during productive or performing behaviors.

Procedure:

1. Self-reporting procedures are practiced when students are given a simple task and asked to describe their actions and thoughts as they accomplish a task (for example, completing a puzzle). The "thinking aloud" technique often requires an observer to prompt the student to continue the protocol and not lapse into silence.

2. Collect data over time

3. Examine self-reported responses for flexibility and sophistication of strategies employed and compare these responses to expert processing modes

4. Summarize results

Strengths:

1. Students develop an awareness of professional processes/strategies

2. Improvement in sophistication of professional processes/strategies is easily documented

3. The self-reporting process helps to clarify thinking

Limitations:

1. Self-reporting process is awkward and may interfere with work in progress

2. Probing during the reporting process may be required by the trained observer

3. The data collection process is time consuming

Conditions:

1. Use self-reporting when there is an emphasis on professional thinking

2. Use self-reporting when comparisons are needed between an individual's processing as compared with peers and/or field-related experts

Reflective Interview/Journal

A reflective interview/journal is a record of impressions during the stages of investigation or productive work shared with a trained observer. It describes the student's impressions of the processes employed and/or his or her evaluation of the end product.

Procedure:

1. Establish major aspects of work to be evaluated with the student

2. Develop procedures to be used to collect data or observations for interview or to be recorded during work stages

3. Conduct interview, review journal
4. Summarize results

Strengths:

1. Reflective interview/journal is sensitive to the changes in student work

2. Stages of work and results are open-ended and ongoing and reviewed from the student's perspective

3. Reflective interview/journal is a realistic use of techniques employed by field-related experts during the productive stages of ongoing investigation

Limitations:

1. Does not intend to measure aptitude, but rather the evolving progress of student thinking and work from the student's perspective

2. Data may be collected inconsistently and interview/journal may not include "lost bits of data" during the production stages, reducing the effectiveness of interview

Conditions:

1. Use reflective interview/journal when there is emphasis on the ongoing evolvement of individual ability from the student view

2. Use reflective interview/journal to emphasize professional processes/strategies and the individual's attitudes/behaviors during the creative process

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Types of Complex Outcomes and Examples

Affective Dispositions / Behaviors

Assessment of dispositions/behaviors occurs when data is gathered regarding **a general pattern of behavior or response** as it relates to the completion of a complex task. For example, the student may be assessed for evidence of persistence, or openness to another point of view.

To observe persistence, the following general pattern of behavior may be evident:

1. student continues to work on a task despite difficulty of task
2. student tries alternative strategies
3. student seeks additional resources to assist in task completion
4. student paces herself/himself appropriately and is goal-directed toward completion of task
5. student completes task

Thinking Processes / Strategies

Thinking processes/strategies are defined as broad and inclusive mental processes. Assessment of the use of thinking processes/strategies occurs when data is gathered regarding: the **repertoire of processes/strategies** the individual displays; the **intelligent selection** of an appropriate process/strategy for a particular task; the **appropriate and efficient application** of the process/strategy to accomplish a particular task; and the **monitoring process** which the individual engages in during the work stages and at the completion of the task.

For example, the student may be assessed for the use of a creative problem-solving model, the operations involved in drawing a conclusion or the identification of flaws in an argument structure advanced in a local newspaper editorial. The student who is able to appropriately apply a creative problem-solving model is able to:

1. identify several subproblems from a mess
2. identify and state a manageable problem
3. generate alternative solutions
4. define criteria
5. evaluate solutions
6. develop an action plan

Complex Tasks

Complex tasks are defined as challenging tasks which involve a number of actions and require the individual to apply sophisticated, novel, or complex strategies to successfully accomplish the task. The completion of complex tasks may be revealed in a record/summary of processes employed and/or a final product.

Assessment of appropriate actions toward the completion of complex tasks occurs when data is gathered regarding: the **identification and sequencing of steps** toward task completion; the **monitoring of the action phases** used toward completion of each step; **devising/knowing/applying criteria** for the successful completion of each step; and **competent performance** as defined by criteria for the stages of investigation and final completion of the task.

Examples of complex tasks are: students conduct a scientific experiment; students plan an event such as grandparents' day; students work collaboratively during the phases of a simulation on world peace; or students use an electronic search procedure to discover related areas of information in an electronic encyclopedia.

For example, students may be assessed regarding their competency during the research phases of investigation where an electronic search procedure is used. The following criteria may be used to critique student performance:

1. ability of the student to "open" the software and efficiently begin the search procedure
2. sophistication of "descriptors" employed which define and narrow search topic (women and pioneers and 1900...)
3. use of logical systems which limit and refine search task
4. creativity employed in the use of "key word" descriptors to identify and develop a research topic
5. thoroughness and efficiency of electronic search

Products

Products involve the application of complex, sophisticated and/or novel strategies of experts in a given field toward the completion of a product. Products reveal a pattern of thinking and communicate original work in an appropriate format. Products may be used as a tool for learning or as a verification of learning.

Examples of product formats include: research papers; posters; inventions; scientific experiments; debates; and newspapers. Criteria for the evaluation of student products is developed for both the "content" of the productive work as well as the "format" of the work. For example, students who construct the front page of a newspaper during colonial times must accomplish this task by portraying historically accurate information and presenting this information in the correct format of the front page of a newspaper.

The following criteria may by used to evaluate the final product:

Content

1. important historical information was included in the stories
2. information was reported accurately
3. research included primary and secondary sources

Format

1. stories are written in a journalistic style; the five w's (who, what, where, when, and why), were included
2. headlines capture the attention of the reader
3. page layout is attractive and in keeping with historical style
4. illustrations add important visual information and captions help to capture the essence of the story line

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Summary

The assessment and evaluation of complex outcomes is closely tied to an appropriately sophisticated and challenging program for gifted and talented learners. When services are matched to outcomes, student accomplishments may be evaluated and progress toward the full development of talent in young people is revealed. Assessment of student performance as it relates to the delivery of curriculum and student-based services aligned with the intended outcomes, is a crucial component for the evaluation student achievement and for the prescription of future learning plans. The use of several assessment tools to evaluate student performance is shown when combined with a differentiated learning plan which appears in the Appendix.

In summary, the learner is at the center of our school universe. The characteristics and related educational needs of gifted and talented learners frequently requires modification of the curriculum and arrangement of additional learning opportunities. When appropriate educational planning and delivery of services occurs, the following components are in alignment: 1) assessment and evaluation, 2) instruction and 3) outcomes.

Appendices 6

Criteria for Reporting Service Differences and Related Educational Needs

Differentiated Planning Guides

Office of Civil Rights Data: Criteria for Reporting Service

The following criteria should be used as a guide for the selection and reporting of program options which provide service to gifted and talented students:

The primary purpose of gifted and talented service is to meet the cognitive and affective needs of these students due to their characteristics and related educational needs. Gifted and talented service by design capitalizes on student ability or potential and should be distinguished from "enrichment" activities which provide good, challenging instruction for all learners.

There must be an active process to identify gifted and talented students for the activity.

Substantial modifications should be made to meet the educational needs of the gifted and talented student. Modifications in a course of study may include modifications in the course content, the instructional strategies, and/or the products required of students. Courses which give credit for prior learning and reduce or replace regular tasks with challenging tasks may qualify as gifted and talented service if they also include three of the following five components:

1. advanced pace/placement of content or skills
2. extension of the depth or breadth of the content or skills
3. emphasis on themes/interdisciplinary content
4. professional thinking is employed (skills and techniques of a professional in a given field)
5. quality products are developed

and/or

Activities which are planned or tailored to meet individual student needs and which provide a more intensive program are considered gifted and talented service. Examples of this are mentorship programs, specially designed seminars, and tutoring programs which provide instruction beyond what is available from the regular classroom teacher.

Contact the Minnesota Department of Education, 664 Capitol Square Building, St. Paul, Minnesota, 55101, for a copy of Minnesota Statewide Standards for Service to Gifted and Talented Students.

Differences and Related Educational Needs of Gifted Learners

The chart which begins on the next page describes the differences between gifted and talented students and their age peers in each domain of giftedness and their related educational needs. This chart may be used as a guide to develop services for gifted and talented learners which match their talent area. This chart was compiled by Karen Rogers, Director of the Gifted Studies Program, College of St. Thomas, St. Paul, Minnesota.

Table 1

DIFFERENCES	RELATED EDUCATIONAL NEEDS
Intellectual Ability	
More "front end analysis" time in problem- solving situations	Opportunity to practice analysis, evaluation skills; flexible project deadlines
Earlier progression from"concrete operations" to "formal operations" stage of problem solving	Earlier exposure to abstract concepts, logical and critical reasoning skills
More accurate problem-finding skills, recognition of limits of problems	Exposure to a variety of problem situations across domains; practice in problem-solving algorithms, heuristics; opportunity for corrective, realistic feedback; early "mastery" of content in individual area of interest and skill
More rapid and successful in analogical tasks, solutions	Opportunity to integrate across disciplines; practice with making conceptual connections, forced relationships
More efficient and rapid in solving tasks involving memory and concentration	Accelerated pace of content presentation; emphasis on application, synthesis; less effort on review, drill, and practice;
Tendency toward intellectualism, i.e., preference to think in generalities, abstraction	Exposure to group discussion on conceptual, abstract issues, ideas; early mastery of basic facts; emphasis on major ideas, concepts
Specific Academic Aptitude	
Early, intense, prolonged interest and skill in a specific academic area	Early exposure, opportunity for content "mastery" in talent area; mentoring to accelerate progress in area
High motivation, zeal in talent area	Practice in making connections between talent area and other disciplines; opportunity to share knowledge with others with like interest and talent
Tendency to be highly self-critical and evaluative	Exposure to realistic goal-setting exercises; opportunity to pursue interests independently, at own pace

Table 1 continued

DIFFERENCES	RELATED EDUCATIONAL NEEDS
Creative Productive Thinking	
Preference for imposing own structure on situation, learning	Practice with analysis and evaluation skills; exposure to creative problem solving process; opportunity to pursue independent study
High tolerance for ambiguity, willingness to take mental and emotional risks	Flexible learning structure and deadlines; open, accepting learning environment; opportunity to receive corrective feedback and recognition
More positive self-concept, higher degree of confidence, inner locus of control	Opportunity for independent project; individualized assignments; exposure to time management, organizational skills
Higher degree of "non-entrenchment," i.e., capacity to think, produce beyond conventional limits	Opportunity for open-ended assignments; learning contracts for individualized pursuits; practice in developing nonentrenched thinking with programs such as Odyssey of the Mind, etc.
Leadership/Psychosocial Ability	
High degree of task analytic, projective skill	Exposure to increasingly complex tasks, task analysis and project planning techniques (developing an action plan, using a flow chart, etc.)
Higher degree of conceptual, visual, affective perspective-taking; higher levels of interpersonal sensitivity	Early exposure to intellectual, moral, ethical dilemmas, conflict resolution strategies; practice in intuitive expression, role playing through simulations
Earlier acquisition of social cognition, social competence	Opportunity to interface with older students in cross-graded learning environment; exposure to cooperative learning experiences involving social and societal problems; practice with leadership skills

Table 1 continued

DIFFERENCES	REALTED EDUCATIONAL NEEDS
Leadership/Psychosocial Ability	
More positive emotional health, higher degree of stability, fewer nervous symptoms, higher sense of personal worth	Exposure to accepting, supportive, cooperative learning environment; opportunity to develop peer counseling, teaching skills; opportunity to work regularly with groups of like ability, interest
Pronounced tendency to take on more than they can accomplish	Practice in time management organizational skills, realistic goal setting; opportunity to develop realistic individual pursuits through exposure to self-direction skills (e.g., Treffinger model); practice in decision-making
Higher degree of conceptual scanning than focusing; likelihood of disregarding details in lieu of the "big picture"	Exposure to analysis and evaluation skills; opportunity to practice critical thinking skills
Pronounced need to achieve	Opportunity for corrective feedback, reinforcement and recognition; exposure to manageable, individualized projects; provision of benchmarks by which to judge individual progress
Visual/Performing Arts	
Higher degree of motivation, zeal in talent area, leading to lack of attention to academic priorities	Practice in making connections between talent and academic disciplines; opportunity to display talent among chronological, true peers
Quicker, more accurate in tasks of cognitive, verbal, visual matching	Accelerated pace for content presentation; compaction of academic curriculum
Tendency to be self-critical and evaluative	Exposure to realistic goal setting exercises; opportunity to pursue interests independently, at own pace

Table 1 continued

DIFFERENCES	RELATED EDUCATIONAL NEEDS
Visual/Performing Arts	
More intense ability to concentrate, spend long hours in developing their talent area	Flexible project deadlines; less structured assignments accelerated pace for content presentation
Less willingness to cooperate or compromise	Practice with group, cooperative learning projects

Examples of Differentiated Plans

The examples of differentiated plans which appear on the next pages may serve as a guide to the types of service and sample plans which may be developed for gifted and talented students. As these are reviewed, you may wish to note the distinctions between curriculum-based plans which are designed by the classroom teacher, and student-based plans which are planned and supervised by resource teacher of the gifted. In each case, the students' interests and talent areas are considered in the development of the plan.

Figure 6

Student Profile

Name: *Jackie Winters* Grade 2

School: *Ranch Valley* Homeroom Teacher: *Wilson*

Parents: *Joyce & Gary Winters*

Address: *2736 14th Avenue South*

Telephone: (home) 942-1689 (work) M 944-1698 F 888-2490

ABILITIES

ACHIEVEMENT Grades

Area	%	Grades
Reading	*99*	*A*
Language Arts	*98*	*A*
Social Studies	*95*	*B+*
Science	*95*	*B+*
Math	*99*	*A*

APTITUDE %

Verbal	*98*
Quantitative	*97*
Nonverbal	*85*

INTELLIGENCE TESTING:

Wisc-R 142
Verbal 145
Performance 140

INTERESTS/TALENT AREA:

Sports
Sports Heroes
Arts

RECOMMENDATIONS:

Compact Basal Reading
Use literature
Preliminary research skills

RECORD OF PARTICIPATION IN GIFTED SERVICES:

Cluster group '89-'90
Send out for Language Arts, Math related units

Figure 7 ***Differentiated Planning Guide***

Name: *Jackie Winters* **Content/Talent Area:** *Reading*

Teacher: *Wilson* **Grade:** *2*

Conditions for Curriculum-based Services:

1. **Give credit for prior learning**
2. **Reduce or replace regular tasks with challenging tasks**
3. **Design an advanced outcome(s) and include three of the following areas:**

Outcome: *Assume the role of creative producer in the language arts field; expand information gathering skills*

Advanced **PACE/PLACEMENT** of content or skills

- ❑ Content/skill instruction at a rapid pace; reduce examples; reduce practice activities:
- ☑ Accelerate by grade/content area:
- ❑ Eliminate through mastery testing

Emphasis on **THEME/INTERDISCIPLINARY** study

- ☑ Incorporation of theme in the design of student activities: *(collects sports trivia)*
- ❑ Interdisciplinary emphasis (list subject areas):

Extension of the **DEPTH/BREADTH** of the content or skills

- ❑ Advanced/Sophisticated Content/Skills (**DEPTH**)

  Topic(s)/Skill(s):
- ❑ Application of Content/Skills to other Disciplines/Fields (**BREADTH**)

  Discipline(s)/Field(s):
- ☑ Research skills instruction/application

  Research strategies: *(Thinking in categories)*

  Multiple resources: *(Index cards)*

  Development of an independent project: *"Baseball cards" in another sport or interest area*

Use of **PROFESSIONAL THINKING**

- ❑ Applies processes/techniques of professionals in the following field(s):
- ❑ Engages in collaborative work with professional:

Develops **QUALITY PRODUCTS**

- ❑ Product format is varied:
- ☑ Advanced and sophisticated production techniques are introduced: *(card design)*
- ❑ Synthesis of original product or process

J. Winters

EVALUATION PLAN

❑ Performance-based evaluation (test, demonstration, speech)

List Criteria:_____

_____

_____

_____

☑ Narrative Summary (journal, report, log of actions) *(conference)*

Entry Format (i.e. weekly, daily); Final Conference Date: *December 1*

☑ Productive Work/Performance (portfolio, final product)

Final Production/Performance Date: *December 1*

☑ Other *Discussion of characteristics of sports hero or other area selected by student.*

General Comments:

Work with media specialist on art design.

Parent Signature(s): _____

Teacher Signature: _____

Date: *September 30* Duration of Plan: *1st quarter*

Special Thanks...

The idea and the format for a differentiated planning guide using the recommended state criteria was developed by Elaine Chirhart, Becker Public Schools and Debra Lechner, Sartell-St. Stephen Public Schools.

Figure 8

Differentiated Planning Guide

Name: *Jackie Winters* **Content/Talent Area:** *Reading*

Teacher: *Wilson* **Grade:** *2*

Conditions for Student-based Services:

1. **Plan capitalizes on student strengths/interest areas**
2. **Regular work is reduced to "buy time" for participation in services**
3. **Design an advanced outcome and include one or more of the following areas:**

Outcome: *Develop an openness to new areas of learning: react and respond to the challenge of ideas and experience provided*

AFFECTIVE DEVELOPMENT

- ❑ Small group meetings
  Topic:
- ❑ Peer Counseling
  Issues:
- ❑ Referral
  Individual/Agency:
- ❑ Instructional Activities:

INDEPENDENT WORK

- ❑ Learning Goal and Outcome
- ❑ Facilitator/Provider
  - long distance learning
  - correspondence course
  - classroom teacher/specialist
  - other

INDIVIDUAL INSTRUCTION

Topic: Specialist:

Student schedule:

- ❑ Accelerated learning goal/outcome:

  compacted curriculum area:
- ❑ Alternative Learning Goal/Outcome:

SMALL GROUP SESSIONS

- ☑ In-depth Study
  Topic: *Library References*
- ☑ Skill Development
  Skills: *Research: Thinking In Categories*
  Graphic Design: Layout

J. Winters

MENTORSHIP

Field: *Graphic Design*
Mentor: *Bob Morris*
Timeline/commitment:

☑ Informational Interviewing *Elementary Art Specialist*

☐ Career Shadowing

☐ Advanced knowledge and/or skill building

☐ Field Work

☐ Student project
Learning Goal/Outcome:

EVALUATION PLAN

☐ Performance-based evaluation (test, demonstration, speech)

List Criteria: *Selection of relevant categories in keeping with "baseball card " design; card design; number of entries; student's analysts of common characterstics of public persons*

☐ Narrative Summary (journal, report, log of actions)

Entry format (i.e. weekly, daily); Final Conference Date: _____

☑ Productive Work hours/Performance (portfolio, final product) *Baseball cards in another sport*

Final Production/Performance Date: _____

☐ Other _____

Comments:

Parent Signature(s): _____
Teacher Signature: _____
Date: _____ Duration of Plan: _____

Figure 9

Student Profile

Name: *Tricia Nelson* Grade *9*

School: *Anderson Jr. High School* Homeroom Teacher: *Notman*

Parents: *Camie Andres, Peter Nelson*

Address: *Mom: 741 2nd Street*

Telephone: (home) *735-1116* (work) M *735-2704* F *733-1598*

ABILITIES

ACHIEVEMENT Grades

Area	%	Grades
Reading	*99*	*A*
Math	*87*	*B*
Science	*99*	*A*
Social Studies	*96*	*A*
Language Arts	*95*	*A*

APTITUDE %

Verbal	*99*
Quantitative	*85*
Nonverbal	*95*

INTELLIGENCE TESTING:

Otis-Lennon 130

INTERESTS/TALENT AREA:

Science

RECOMMENDATIONS:

Advanced, small group work in Science interest area

RECORD OF PARTICIPATION IN GIFTED SERVICES:

Honors Science
Elementary send-out program
Science Olympiad

Figure 10 *Differentiated Planning Guide*

Name: *Tricia Nelson* **Content/Talent Area:** *Science, Visual Arts*

Teacher: *McDermot* **Grade:** *9*

Conditions for Curriculum-based Services:

1. **Give credit for prior learning**
2. **Reduce or replace regular tasks with challenging tasks**
3. **Design an advanced outcome(s) and include three of the following areas:**

Outcome: *Identify a global problem or concern and construct to illustrate interrelated areas; develop a method to communicate about a social problem to raise awareness and encourage action*

Advanced **PACE/PLACEMENT** of content or skills

- ❑ Content/skill instruction at a rapid pace; reduce examples; reduce practice activities:
- ❑ Accelerate by grade/content area:
- ❑ Eliminate through mastery testing

Emphasis on **THEME/INTERDISCIPLINARY** study

- ❑ Incorporation of theme in the design of student activities:
- ☑ Interdisciplinary emphasis (list subject areas): *Science, Social Studies, Communications*

Extension of the **DEPTH/BREADTH** of the content or skills

- ❑ Advanced/Sophisticated Content/Skills (**DEPTH**)

  Topic(s)/Skill(s):

- ❑ Application of Content/Skills to other Disciplines/Fields (**BREADTH**)

  Discipline(s)/Field(s):

- ☑ Research skills instruction/application

  Research strategies: *KIDNET, Telementor*

  Multiple resources: *Journals, Computer network*

  Development of an independent project: *Acid Rain Project*

Use of **PROFESSIONAL THINKING**

- ☑ Applies processes/techniques of professionals in the following field(s): *Adverstising, marketing*
- ☑ Engages in collaborative work with professional: *Telementor*

Develops **QUALITY PRODUCTS**

- ❑ Product format is varied:
- ❑ Advanced and sophisticated production techniques are introduced:
- ❑ Synthesis of original product or process

T. Nelson

EVALUATION PLAN

☑ Performance-based evaluation (test, demonstration, speech)

List Criteria: *Development of goals; actions which build support for project; use of varied resources; plan for community involvement*

☐ Narrative Summary (journal, report, log of actions)

Entry Format (i.e. weekly, daily); Final Conference Date: _____

☑ Productive Work/Performance (portfolio, final product)

Final Production/Performance Date: *April 23*

☐ Other _____

General Comments:

Parent Signature(s): _____

Teacher Signature: _____

Date: _____ Duration of Plan: _____

Special Thanks...

The idea and the format for a differentiated planning guide using the recommended state criteria was developed by Elaine Chirhart, Becker Public Schools and Debra Lechner, Sartell-St. Stephen Public Schools.

Figure 11

Differentiated Planning Guide

Name: *Tricia Nelson* **Content/Talent Area:** *Science, Visual Arts*

Teacher: *McDermot* **Grade:** *9*

Conditions for Student-based Services:

1. **Plan capitalizes on student strengths/interest areas**
2. **Regular work is reduced to "buy time" for participation in services**
3. **Design an advanced outcome and include one or more of the following areas:**

Outcome: *To communicate with an expert in the content/talent area; have increased proficiency in the skills and processes in an area of interest; understand and appreciate the conditions and climate necessary for investigative and productive work*

AFFECTIVE DEVELOPMENT

- ❑ Small group meetings
  Topic:
- ❑ Peer Counseling
  Issues:
- ❑ Referral
  Individual/Agency:
- ❑ Instructional Activities:

INDEPENDENT WORK

- ☑ Learning Goal and Outcome
  Develop an Acid Rain Awareness Campaign
- ☑ Facilitator/Provider
  - long distance learning
  - correspondence course
  - classroom teacher/specialist
  - other

INDIVIDUAL INSTRUCTION

Topic: *Acid Rain* Specialist:

Student schedule: *3rd hour*

- ☑ Accelerated learning goal/outcome: *Acid Rain Indepth Investigation*

  compacted curriculum area: *Science*
- ☑ Alternative Learning Goal/Outcome: *Awareness Campaign*

SMALL GROUP SESSIONS

- ❑ In-depth Study
  Topic:
- ❑ Skill Development
  Skills:

T. Nelson

MENTORSHIP

Field:
Mentor: *Telementor*
Timeline/commitment:

☑ Informational Interviewing

☐ Career Shadowing

☑ Advanced knowledge and/or skill building

☐ Field Work

☐ Student project
Learning Goal/Outcome:

EVALUATION PLAN

☐ Performance-based evaluation (test, demonstration, speech)
List Criteria: *Development of goals; actions which build support for project; use of varied resources; plan for community involvement*

☐ Narrative Summary (journal, report, log of actions)
Entry format (i.e. weekly, daily); Final Conference Date: _____

☑ Productive Work hours/Performance (portfolio, final product)
Final Production/Performance Date: *April 23*

☐ Other _____

Comments:

Parent Signature(s): _____
Teacher Signature: _____
Date: _____ Duration of Plan: _____

Figure 12

Student Profile

Name: *Terry Houser* Grade *7*

School: *Riverview Jr. High School* Homeroom Teacher: *Nelson*

Parents: *Mary & Tyler Houser*

Address: *532 Maple*

Telephone: (home) *636-1798* (work) M *633-8914* F *Home*

ABILITIES

ACHIEVEMENT Grades

Area	%	Grades
Language Arts	*99*	*A*
Math	*91*	*A*
Social Studies	*98*	*A*
Science	*94*	*B+*

APTITUDE %

Verbal	*98*
Quantitative	*97*
Nonverbal	*91*

INTELLIGENCE TESTING:

Otis Lennon 136

INTERESTS/TALENT AREA:

Music
Drama
Art

RECOMMENDATIONS:

Mentor: Theater costume design
Eliminate grammar review in English
Mastery test next two units

RECORD OF PARTICIPATION IN GIFTED SERVICES:

Honors Social Studies, English
Accelerated Math
Independent projects in grade 6 in Science areas of interest:
Rocketry Design and Construction

Figure 13 *Differentiated Planning Guide*

Name: *Terry Houser* **Content/Talent Area:** *Language Arts*

Teacher: *Nelson* **Grade:** *7*

Conditions for Curriculum-based Services:

1. **Give credit for prior learning**
2. **Reduce or replace regular tasks with challenging tasks**
3. **Design an advanced outcome(s) and include three of the following areas:**

Outcome: *develop an original work ; demonstrate the use of critical thinking skills in the production, creation or evaluation of a work*

Advanced **PACE/PLACEMENT** of content or skills

- ❑ Content/skill instruction at a rapid pace; reduce examples; reduce practice activities:
- ❑ Accelerate by grade/content area:
- ❑ Eliminate through mastery testing

Emphasis on **THEME/INTERDISCIPLINARY** study

- ❑ Incorporation of theme in the design of student activities:
- ☑ Interdisciplinary emphasis (list subject areas): *Shakespeare (Literature), Art*

Extension of the **DEPTH/BREADTH** of the content or skills

- ☑ Advanced/Sophisticated Content/Skills (**DEPTH**)

  Topic(s)/Skill(s): *Costume Design*
- ❑ Application of Content/Skills to other Disciplines/Fields (**BREADTH**)

  Discipline(s)/Field(s):
- ☑ Research skills instruction/application

  Research strategies: *period, costume research*

  Multiple resources: *Library, theater archives*

  Development of an independent project: *costume designs for Hamlet*

Use of **PROFESSIONAL THINKING**

- ☑ Applies processes/techniques of professionals in the following field(s): *theater arts*
- ☑ Engages in collaborative work with professional: *mentor at local theater company*

Develops **QUALITY PRODUCTS**

- ❑ Product format is varied:
- ❑ Advanced and sophisticated production techniques are introduced:
- ❑ Synthesis of original product or process

T. Houser

EVALUATION PLAN

☑ Performance-based evaluation (test, demonstration, speech)

List Criteria: *Appropriate design in keeping with the historical period; interesting use of original designs; innovative use of materials*

☐ Narrative Summary (journal, report, log of actions)

Entry Format (i.e. weekly, daily); Final Conference Date: _____

☑ Productive Work/Performance (portfolio, final product) *sketches*

Final Production/Performance Date: *April 20*

☐ Other _____

General Comments:

Parent Signature(s): _____

Teacher Signature: _____

Date: *2/15* Duration of Plan: *3rd quarter*

Special Thanks...

The idea and the format for a differentiated planning guide using the recommended state criteria was developed by Elaine Chirhart, Becker Public Schools and Debra Lechner, Sartell-St. Stephen Public Schools.

Figure 14

Differentiated Planning Guide

Name: *Terry Houser* **Content/Talent Area:** *Theater Arts*

Teacher: *Nelson* **Grade:** *7*

Conditions for Student-based Services:

1. **Plan capitalizes on student strengths/interest areas**
2. **Regular work is reduced to "buy time" for participation in services**
3. **Design an advanced outcome and include one or more of the following areas:**

Outcome: *Increased proficiency in the skills and processes in an area of interest; learn how to pursue the talent/content area independently; become aware of the additional preparation necessary to become an expert in a talent area*

AFFECTIVE DEVELOPMENT

- ❑ Small group meetings
  Topic:
- ❑ Peer Counseling
  Issues:
- ❑ Referral
  Individual/Agency:
- ❑ Instructional Activities:

INDEPENDENT WORK

- ☑ Learning Goal and Outcome *English teacher will moniter progress bi-weekly, Costume design for Hamlet*
- ❑ Facilitator/Provider
  - long distance learning
  - correspondence course
  - classroom teacher/specialist
  - other

INDIVIDUAL INSTRUCTION

Topic: Specialist:

Student schedule:

- ❑ Accelerated learning goal/outcome:

  compacted curriculum area:
- ❑ Alternative Learning Goal/Outcome:

SMALL GROUP SESSIONS

- ❑ In-depth Study
  Topic:
- ❑ Skill Development
  Skills:

T. Houser

MENTORSHIP

Field: *Theater Costume Design*
Mentor: *Deborah Randolph*
Timeline/commitment: *3rd Quarter, bi-weekly*

- ☐ Informational Interviewing
- ☐ Career Shadowing
- ☑ Advanced knowledge and/or skill building
- ☐ Field Work
- ☑ Student project
  Learning Goal/Outcome: *Costume Design for Hamlet*

EVALUATION PLAN

☑ Performance-based evaluation (test, demonstration, speech)

List Criteria: *Appropriate design in keeping with the historical period; interesting use of original designs; innovative use of materials*

☐ Narrative Summary (journal, report, log of actions)

Entry format (i.e. weekly, daily); Final Conference Date: _____

☑ Productive Work hours/Performance (portfolio, final product) *sketches*

Final Production/Performance Date: *April 20*

☐ Other _____

Comments:

Parent Signature(s): _____
Teacher Signature: _____
Date: _____ Duration of Plan: _____

Figure 15

Student Profile

Name: *Shawna Pearson* Grade *11*

School: *Eden Senior High School* Homeroom Teacher: *Schultz*

Parents: *Travis & Mary Pearson*

Address: *212 SW 2nd Street*

Telephone: (home) *647-2110* (work) M *642-9813* F *647-4936*

ABILITIES

ACHIEVEMENT Grades

Area	%	Grades
Science	*89*	*C*
Math	*95*	*C*
English	*90*	*A*
Social Studies	*97*	*C*

APTITUDE %

Verbal	*98*
Quantitative	*90*
Nonverbal	*97*

INTELLIGENCE TESTING:

Otis-Lennon 145

INTERESTS/TALENT AREA:

Language Arts
Poetry

RECOMMENDATIONS:

Intervention for academic underachievement

Small group sessions

Mentor for interest area

RECORD OF PARTICIPATION IN GIFTED SERVICES:

Send-out program in elementary
Honors English-grades 7-8-9-10
Accelerated Math-grade 7

Figure 16 *Differentiated Planning Guide*

Name: *Shawna Pearson* **Content/Talent Area:** *Visual Arts Theater*

Teacher: *Schultz* **Grade:** *11*

Conditions for Curriculum-based Services:

1. **Give credit for prior learning**
2. **Reduce or replace regular tasks with challenging tasks**
3. **Design an advanced outcome(s) and include three of the following areas:**

Outcome: *Assume the role of a creative producer in the language arts field; pursue advanced learning in an area of special interest or talent*

Advanced **PACE/PLACEMENT** of content or skills

- ❑ Content/skill instruction at a rapid pace; reduce examples; reduce practice activities:
- ❑ Accelerate by grade/content area:
- ❑ Eliminate through mastery testing

Emphasis on **THEME/INTERDISCIPLINARY** study

- ☑ Incorporation of theme in the design of student activities: *Examine and use theme for poetry collection*
- ❑ Interdisciplinary emphasis (list subject areas):

Extension of the **DEPTH/BREADTH** of the content or skills

- ❑ Advanced/Sophisticated Content/Skills (**DEPTH**)

  Topic(s)/Skill(s):
- ❑ Application of Content/Skills to other Disciplines/Fields (**BREADTH**)

  Discipline(s)/Field(s):
- ❑ Research skills instruction/application

  Research strategies:

  Multiple resources:

  Development of an independent project:

Use of **PROFESSIONAL THINKING**

- ❑ Applies processes/techniques of professionals in the following field(s):
- ☑ Engages in collaborative work with professional: *Develop poetry collection, work with poet and submit for publication*

Develops **QUALITY PRODUCTS**

- ❑ Product format is varied:
- ❑ Advanced and sophisticated production techniques are introduced:
- ☑ Synthesis of original product or process *poetry collection*

EVALUATION PLAN

☑ Performance-based evaluation (test, demonstration, speech)

List Criteria: *Selection of a theme; use of appropriate style; ability to communicate abstract ideas in elegant and descriptive language; appeal to reader*

☐ Narrative Summary (journal, report, log of actions)

Entry Format (i.e. weekly, daily); Final Conference Date: _____

☑ Productive Work/Performance (portfolio, final product) *poetry collection*

Final Production/Performance Date: *March 16*

☑ Other *Submit for publication*

General Comments:

Parent Signature(s): _____

Teacher Signature: _____

Date: _____ Duration of Plan: _____

Special Thanks...

The idea and the format for a differentiated planning guide using the recommended state criteria was developed by Elaine Chirhart, Becker Public Schools and Debra Lechner, Sartell-St. Stephen Public Schools.

S. Pearson

MENTORSHIP

Field: *Writing*
Mentor: *Poet, College Professor*
Timeline/commitment: *3rd quarter, after school, schedule bi-monthly review conferences*

- ☐ Informational Interviewing
- ☐ Career Shadowing
- ☑ Advanced knowledge and/or skill building
- ☑ Field Work
- ☑ Student project
  Learning Goal/Outcome: *Poetry collection submit for publication*

EVALUATION PLAN

☑ Performance-based evaluation (test, demonstration, speech)

List Criteria: *Selection of a theme; use of appropriate style; ability to communicate abstract ideas in elegant and descriptive language; appeal to reader*

☐ Narrative Summary (journal, report, log of actions)

Entry format (i.e. weekly, daily); Final Conference Date: _____

☑ Productive Work hours/Performance (portfolio, final product)

Final Production/Performance Date: *March 16* *Poetry collection submit for publication*

☐ Other _____

Comments:

Parent Signature(s): _____
Teacher Signature: _____
Date: _____ Duration of Plan: _____

Figure 18

Student Profile

Name: *Trevor Jasper* Grade *5*

School: *Pine Creek* Homeroom Teacher: *Erickson*

Parents: *Tamra & Ray Jasper*

Address: *202 14th Street North*

Telephone: (home) *228-7431* (work) M _____ F *282-7951*

ABILITIES

ACHIEVEMENT Grades

Area	%	Grades
Reading	*99*	*A*
Math	*99*	*A*
Science	*97*	*A-*
Social Studies	*84*	*B*
Language Arts	*95*	*A-*

APTITUDE %

Verbal	*97*
Quantitative	*99*
Nonverbal	*99*

INTELLIGENCE TESTING:

not used

INTERESTS/TALENT AREA:

Science
Creativity
Mechanical Abilities

RECOMMENDATIONS:

Prototype of invention
Participate in Inventor's Fair

RECORD OF PARTICIPATION IN GIFTED SERVICES:

Omnibus Grade 2 - present
Cluster Classroom

Figure 19 *Differentiated Planning Guide*

Name: *Trevor Jasper* **Content/Talent Area:** *Science/ Creativity*

Teacher: *Erickson* **Grade:** *5*

Conditions for Curriculum-based Services:

1. **Give credit for prior learning**
2. **Reduce or replace regular tasks with challenging tasks**
3. **Design an advanced outcome(s) and include three of the following areas:**

Outcome: *Use several problem solving approaches and models*

Advanced **PACE/PLACEMENT** of content or skills

- ❑ Content/skill instruction at a rapid pace; reduce examples; reduce practice activities:
- ☑ Accelerate by grade/content area: *Science*
- ❑ Eliminate through mastery testing

Emphasis on **THEME/INTERDISCIPLINARY** study

- ❑ Incorporation of theme in the design of student activities:
- ☑ Interdisciplinary emphasis (list subject areas): *Science, Industrial Arts*

Extension of the **DEPTH/BREADTH** of the content or skills

- ☑ Advanced/Sophisticated Content/Skills (**DEPTH**)

  Topic(s)/Skill(s): *Development of prototype*
- ☑ Application of Content/Skills to other Disciplines/Fields (**BREADTH**)

  Discipline(s)/Field(s): *Science*
- ❑ Research skills instruction/application

  Research strategies:

  Multiple resources:

  Development of an independent project:

Use of **PROFESSIONAL THINKING**

- ❑ Applies processes/techniques of professionals in the following field(s):
- ❑ Engages in collaborative work with professional:

Develops **QUALITY PRODUCTS**

- ❑ Product format is varied:
- ❑ Advanced and sophisticated production techniques are introduced:
- ☑ Synthesis of original product or process *Invention*

EVALUATION PLAN

☑ Performance-based evaluation (test, demonstration, speech)

List Criteria: *Simplicity and sophistication of improvements shown: practicality of product; finished quality of product*

☐ Narrative Summary (journal, report, log of actions)

Entry Format (i.e. weekly, daily); Final Conference Date: _____

☑ Productive Work/Performance (portfolio, final product) *prototype*

Final Production/Performance Date: *May 26*

☐ Other _____

General Comments:

Parent Signature(s): _____

Teacher Signature: _____

Date: _____ Duration of Plan: _____

Special Thanks...

The idea and the format for a differentiated planning guide using the recommended state criteria was developed by Elaine Chirhart, Becker Public Schools and Debra Lechner, Sartell-St. Stephen Public Schools.

Figure 20

Differentiated Planning Guide

Name: *Trevor Jasper* **Content/Talent Area:** *Science, Creativity*

Teacher: *Erickson* **Grade:** *5*

Conditions for Student-based Services:

1. **Plan capitalizes on student strengths/interest areas**
2. **Regular work is reduced to "buy time" for participation in services**
3. **Design an advanced outcome and include one or more of the following areas:**

Outcome: *Communicate with an expert in the field; pursue content/talent area independently; react and respond to the challenge of ideas*

AFFECTIVE DEVELOPMENT

- ❑ Small group meetings
  Topic:
- ❑ Peer Counseling
  Issues:
- ❑ Referral
  Individual/Agency:
- ❑ Instructional Activities:

INDEPENDENT WORK

- ☑ Learning Goal and Outcome

  Develop a prototype of an original invention

- ❑ Facilitator/Provider
  - long distance learning
  - correspondence course
  - classroom teacher/specialist
  - other

INDIVIDUAL INSTRUCTION

Topic: Specialist:

Student schedule:

- ☑ Accelerated learning goal/outcome:

  compacted curriculum area: *Science*

- ☑ Alternative Learning Goal/Outcome: *Develop a prototype of an original invention*

SMALL GROUP SESSIONS

- ❑ In-depth Study
  Topic:
- ❑ Skill Development
  Skills:

MENTORSHIP

Field:
Mentor:
Timeline/commitment:

- ☑ Informational Interviewing *Inventor*
- ☐ Career Shadowing
- ☐ Advanced knowledge and/or skill building
- ☐ Field Work
- ☐ Student project
  Learning Goal/Outcome:

EVALUATION PLAN

☑ Performance-based evaluation (test, demonstration, speech)

List Criteria: *Simplicity and sophistication of improvements shown; practicality of product; finished quality of product;*

☐ Narrative Summary (journal, report, log of actions)

Entry format (i.e. weekly, daily); Final Conference Date: _____

☑ Productive Work hours/Performance (portfolio, final product) *prototype*

Final Production/Performance Date: *May 26*

☐ Other _____

Comments:

Parent Signature(s): _____
Teacher Signature: _____
Date: _____ Duration of Plan: _____

Suggested Readings 7

Bloom, Benjamin S. *Developing Talent in Young People*. New York: Ballantine Books, Ed. 1985.

Cox, June, and Daniel, Neil, and Boston, Bruce O. *Educating Able Learners: Programs and Promising Practices*. Austin: University of Texas Press 1985.

Davis, Gary A., & Rimm, Sylvia B. *Education of the Gifted and Talented.* Englewood Cliffs, NJ: Prentice Hall 1985.

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Gallagher, James J. *Teaching the Gifted Child*. Boston: Allyn and Bacon, Inc. 1985.

Keating, Daniel P. *Intellectual Talent: Research and Development*. Baltimore: The Johns Hopkins University Press 1976.

Maker, C. June. *Teaching Models in the Education of the Gifted*. Rockville, MD: Aspen Systems 1982.

Perkins, D. N. *The Mind's Best Work*. Cambridge: Harvard University Press 1981.

Renzulli, J. S. *Systems and Models in Developing Programs for the Gifted and Talented*. Mansfield Center, CT: Creative Learning Press Ed. 1986.